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ABSTRACT

The dissemination of research findings concerning postsecondary education governance and finance is considered in the proceedings of a 1986 conference sponsored by the National Center for Postsecondary Governance and Finance. Included are four commissioned papers, a background paper, a paper reviewing the role of effectiveness, and an overview of participant reaction to these papers. Paper titles and authors are as follows: "Planning for Research Use in Postsecondary Governance and Finance" (Ward S. Mason); "On Learning To Add" (William N. Dunn); "Effective Dissemination in a National Education Research Center" (John H. Hollifield); "Meshing the Gears: Reporting on Higher Education in America" (Mike Bowler); "The Consensus Development Conferences of the National Institutes of Health as a Model for Education and Other Fields" (Ronald G. Havelock); and "Dissemination, Communication Effects and Organizational Effectiveness" (Kathryn Theus). Included is a framework for disseminating policy research that includes policy analysis, technical communication, and public information. Mr. Hollifield's paper describes dissemination activities of The Johns Hopkins Center for Effective Elementary and Middle Schools. (SW)

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NATIONAL CENTER FOR POSTSECONDARY GOVERNANCE & FINANCE

PROCEEDINGS OF A CONFERENCE ON DISSEMINATING FINDINGS OF RESEARCH ON POSTSECONDARY GOVERNANCE AND FINANCE

Ward S. Mason, Editor

U.S. DEPARTMENT OF EDUCATION
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1987

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FOREWORD

Since its formation in 1985, the National Center for Postsecondary Governance and Finance, a higher education research center funded by OERI/OR, has pursued a systematic process of planning for the dissemination of its research. Dissemination is a major function of all research centers sponsored by the Department of Education's Office of Educational Research and Improvement (OERI/OR). Dissemination is especially important in a center focusing on policy research, since policy research inherently is concerned with applied issues.

Ideas for dissemination were solicited from a variety of sources during the process of writing the technical application for the center grant, and the application contained the outline of the Center's initial program. During the first year of operation, relatively routine dissemination activities coincided with the planning of a more comprehensive program. These activities included preparation of a brochure, two newsletters, press releases concerning the Center's establishment and program, and presentations at a number of professional meetings and conferences.

A planning meeting held in August 1986, brought together a number of higher education representatives, who helped structure a dissemination conference to guide Center planning for future years. (See Appendix A for a list of attendees.) At the conference held on Nov. 21, 1986 (see list of participants in Appendix B), four individuals made presentations on facets of the dissemination function based on their own background and experience. The four included: Mike Bowler, a journalist with the Baltimore Evening Sun and president of the Education Writers Association; William N. Dunn, professor and director of the Study of Knowledge Use Program, Graduate School of Public and International Affairs, University of Pittsburgh; John Hollifield, assistant director of the Center for Effective Elementary and Middle Schools, The Johns Hopkins University; and Ronald G. Havelock, research professor at the Center for Productive Use of Technology, George Mason University. The four commissioned papers presented by these individuals constitute the core of the present Proceedings. General editor, Ward Mason's May 1986 pre-conference background paper, as well as a paper reviewing the role of effectiveness prepared by Kathryn Theus, Center Associate Director, are also included. A group of dissemination specialists served as respondents to these presentations. James Bencivenga, director of the Information Services Program and Salvatore Corrallo, Center Liaison, represented the Center's sponsor, OERI/OR. Four members of the Center staff also attended. Mason chaired the discussion following the presentations.

Summary of Conference Discussions

Richard Chait, executive director of the Center, welcomed and introduced the visitors. To provide a framework for considering dissemination issues, he indicated his view of the Center's target audiences in rank order.

- campus leaders (presidents, trustees, etc.),
- state policy makers,
- federal policy makers,
- the scholarly community, and
- the lay community

These stakeholders vary considerably in their interests and concerns. Chait pointed out that the Center needs to consider the extent to which each requires different products and approaches.

In a broader context, the Center also needs to be wary of several aspects of the current environment. One is the demand for simple answers to complex problems. While simple answers may not be available, there is still a need to provide understandable summaries and interpretations. Information also should be provided to focus public attention on areas of crisis or popular concern.

The Center knows how to disseminate its findings to the research community. It is less certain about identifying effective strategies for informing other constituencies.

Frank Schmidtlein, the Center's associate director for research, expressed the desire to keep expectations for dissemination efforts realistic. At the elementary/secondary levels, the Office of Educational Research and Improvement (OERI) supports a larger number of research centers, a network of regional educational laboratories, and specialized dissemination programs such as the National Diffusion Network (NDN). In higher education there are only two centers and no equivalent laboratories. However, laboratories do not limit themselves to pre-college education. Several have a particular interest in the articulation of research between pre-college and higher education. At all levels the Educational Resource Information Center (ERIC) serves as access points to research findings and provides complementary services.

Salvatore Corrallo, OERI/OR liaison to the Center, underscored the need to plan for dissemination from each project's beginning and to shape dissemination efforts to reach particular audiences.

James Bencivenga, director of the Information Services Program of OERI/OR, presented a federal perspective on the issue. An overarching goal of OERI/OR is to promote an intellectual exchange across all levels of society. Responding to Chait's listing of target audiences, he suggested attention to governors and their aides.

In the area of higher education finance, OERI/OR has a great interest in actual costs, particularly in the difference between public and private institutional costs, and who bears the costs.

As a journalist, Bowler believes that when disseminating through the mass media, comparisons are the primary way of communicating complex findings. For example, comparing our educational system with that of Japan and of European countries is very helpful. The Department of Education is about to release a report on Japanese education that should have quite an impact. Another enlightening comparison might include our educational system with corporate classrooms.

In the background paper, Mason noted that the Center's commitment to policy research implies a strong interest in research application and utilization. Yet the historical record on the use of research in policy making is ambiguous at best and discouraging at worst. This suggests the need to be clear about what is meant by use and to develop different approaches for working with policy makers at different stages of the policy-making process.

Several "general principles" were propounded:

- Planning dissemination should not be put off until "later when we have some research completed;" concern for research use should enter into Center thinking as research is being planned.
- The Center should not think of itself as a lone operator, responsible for every step of a long-term programmatic effort. Rather, it is a part of several communities with which it can work out useful divisions of labor.
- There tends to be a negative relationship between the scope of diffusion activities and the strength of their impact.
- The Center should give full consideration to all three major modes of dissemination: information services, professional development, and technical assistance.
- The Center should attempt to base its dissemination plans on the findings of research utilization studies, and it should commit some of its resources to making a contribution to knowledge in that field.

Mason presented a framework for structuring a dissemination plan consisting of the following categories:

- Planning
- Public information
- Staff services
- Outreach
- Research/evaluation

In connection with each category the following questions should be addressed:

- What activities should the Center undertake?
- What are the staffing implications?
- How can the Center make maximum use of its resources by working with and through other organizations?

Placement of Papers in a Conceptual Framework

In introducing the papers featured at the conference, and the analysis by Theus, it is helpful to place them within a framework, (presented in Figure 1) which is structured around the need to develop different dissemination approaches for different audiences. The three major audiences -- policy makers, researchers and lay stakeholders are shown on the right. Obviously, these publics might be more finely differentiated, but they serve to highlight the major distinctions. Each of the papers focus on reaching different audiences, often by similar means.

William N. Dunn writes from the perspective of both a theorist and one who manages a program that provides policy analysis to the Pennsylvania State Legislature. His paper, "On Learning to ADD," provides a set of conceptual tools for understanding the relationship between policy research and policy making, for developing appropriate information products, and for disseminating them to policy makers. For him, the key to this is refining the nature of policy analysis, which he differentiates from policy research. Policy analysis is a practical methodology for dealing with the problems of specific clients in a short time frame using readily available sources of information. Its methods include sound logical reasoning, comparison of pro and con arguments, and simple arithmetic. Typical products including policy issue papers, policy memoranda, and policy news releases. Methods of disseminating policy analysis documents are very pragmatic and feature many forms of personal contact (see Fig. 1).

Figure 1
Framework For Disseminating Policy Research

Dissemination	Method	Publics
POLICY ANALYSIS (See Dunn & Havelock)		POLICY MAKERS
o Policy issue paper o Policy memorandum o Policy brief o Policy news release	o Transmitting o Forwarding o Calling o Meeting o Briefing o Conferencing	
TECHNICAL COMMUNICATION (See Hollifield & Havelock)		RESEARCHERS
o Technical reports o Journal articles o Books and Chapters	o Publishing o Conferencing o Networking with "Invisible colleges"	
PUBLIC INFORMATION (see Bowler & Havelock)		STAKEHOLDERS
o Brochure o Newsletter o Inquiries o Press releases	o Publishing o Meeting o Replying	

John Hollifield's paper, "Effective Dissemination in a National Education Research Center," describes dissemination activities of The Johns Hopkins Center for Effective Elementary and Middle Schools. He makes an important distinction between research findings and research products.

To disseminate research findings, the Hopkins Center uses a variety of publications, including a report series, journal articles, books, book chapters, conference papers, and input to the ERIC system. The Hopkins Center also develops prototypic products-- "more specific sets of processes and/or materials for direct use by practitioners to improve their schools and classrooms." Products are disseminated through commercial publication, the National Diffusion Network, the dissemination programs of the OERI/OR sponsored educational laboratories, state education agency dissemination projects, and through other outlets.

In disseminating to the research community, Hollifield places emphasis on providing full reports that permit an examination for theoretical, methodological, and interpretive accuracy and completeness. In disseminating to policy makers and practitioners, who generally have neither time nor inclination to delve into full reports, emphasis is placed on providing summaries and interpretative articles that spell out research implications for specific audiences and particular problems. For all projects, dissemination accomplishments are documented through a dissemination profile which lists the types of information, types of channels, types of audiences reached, the potential number of persons reached, and the timing of the dissemination activity.

In his paper, "Meshing the Gears: Reporting on Higher Education in America," Mike Bowler provides the interesting perspective of a member of the working press and president of the Education Writers Association. His remarks are directed largely at the public information section of Fig 1.

Bowler notes that people are interested in education news, for it involves two things they value intensely: their children and their money. However, he warns that education reporting is a low status beat, and only a handful of reporters specialize in higher education. Bowler also stresses that different audiences have different needs and are reached through different media, including:

- Higher education journals such as the Chronicle and Change.
- National media such as The New York Times, Newsweek, and the networks.
- Local daily papers.

To effectively use the mass media for dissemination, Bowler emphasizes the need to understand the "culture" of the newsroom. Reporters are almost all generalists, interested in stories with the local angle. They like comparisons among cities and states and quantitative data such as SAT scores. They still want "man bites dog" stories, and

graphics and commission reports can have appeal. The Center needs to have personal contacts within each medium. The press thrives on controversy, so take advantage of the interest that controversy can arouse. Good clear writing is, of course, essential.

Ronald G. Havelock's paper, "The Consensus Development Conferences of the NIH as Model for Education and Other Fields" focuses on a very specific dissemination model. The Consensus Development Model he discusses has potential relevance to both policy analysis and technical communication (see Fig. 1), by bringing the research and policy making communities together.

The purpose of the NIH consensus conferences has been to achieve expert agreement where a significant amount of research is available. Other purposes have included: 1) building bridges between clinical research specialists and primary care physicians, 2) understanding technology assessment, 3) diffusing medical knowledge to the general public, and 4) articulating new research agendas.

Havelock describes the model in some detail and then explores whether conditions that seem to support the success of the model in health fields also obtain in education. He finds that the higher education community is analogous in some ways to the medical community. Both adhere to collegial, rather than bureaucratic norms. Education, like agriculture, has attempted to formalize the process of research diffusion and to study how it works. By contrast, medicine has given relatively little attention to diffusion efforts and processes.

The keynote paper by Mason, the four conference papers and the paper by Theus are presented in the following sections, followed by an overview of participant reaction to these papers.

- Ward S. Mason
August, 1987

PLANNING FOR RESEARCH USE

IN POSTSECONDARY GOVERNANCE AND FINANCE

Ward S. Mason
Dissemination Consultant

PLANNING FOR RESEARCH USE IN POSTSECONDARY GOVERNANCE AND FINANCE

The National Center for Postsecondary Governance and Finance is now midway into its first year of operation. It is important that it firm up its approach to providing information and services to its constituencies and to developing a leadership role in its mission area, both for the balance of this first year and in the longer term of its five-year grant.

There is some tendency to consider dissemination as a minor activity of a research center. However, careful consideration of the many facets of the problem of research utilization suggests that dissemination should be accorded status as a major function of an educational R&D center.

The fact that the National Center for Postsecondary Governance and Finance views its mission as focused on policy research is of special significance. This means that the Center intends to judge itself ultimately on the usefulness of its research to policy-makers. Granted that basic research is often an essential basis for creative approaches to policy issues, the Center's mission is fundamentally an applied mission.

Thus, we are concerned with the whole issue of the relation of research to practice. A great deal has been learned about this in the past 10 to 20 years. Indeed, a whole new research specialty focusing on research utilization has emerged. It has its own journal - Knowledge: Creating, Diffusion, and Utilization - and professional networks (e.g. the Special Interest Group on Research Utilization of AERA). Research syntheses have begun to appear (Human Interaction Research Institute, 1976; Havelock, 1969; and Lehming and Kane, 1981). Work has been done in a number of economic sectors. Although research in education has been done primarily at the elementary/secondary level, there is good reason to believe that many findings have potential applicability to higher education as well.

A broad approach to dissemination is advised. We are concerned not only with the provision of information about the results of research, but also with a wide range of other mechanisms for the transfer of knowledge, plus a variety of factors which facilitates or hinders the use of knowledge.

A number of writers have documented the apparently disappointing record on the use of formal policy analysis for the formulation and implementation of policy (Mitchell, 1981; Lindblom and Cohen, 1979; Lynn, 1978). Perhaps that disappointment is valid if one expects a simple instrumental relationship between analysis and action. But there are many meanings of research use (Weiss, 1979), and more often research serves an enlightenment function.

> Research does not solve problems; it provide evidence that can be used by men and women of judgment in their efforts to reach solutions. It helps to establish the premises on which the debate shall take place, and a conceptual base for the discussion of policy (Weiss, 1978, 76-77).

Others have stressed that policy-making is a process, not an event (Mitchell, 1980). Knowledge is useful in different ways at the different stages of the process. At the stage of defining the issues, conceptual and theoretical perspectives may be of primary interest. At the policy deliberation stage, the results of research studies are relevant. In the policy implementation stage, implementation research comes into play. Policy-making, in contrast to policy analysis, is interactive and thus subject to political and other considerations, not just the canons of rationality (Lindblom and Cohen, 1979).

General Principles

As the Center approaches its dissemination planning task, it should follow several general principles:

1. Planning dissemination should not be put off until "later when we have some research completed;" concern for research use should enter into Center thinking and planning from the beginning. Some questions need to be addressed:

- Who are the major audiences and constituencies for the Center's research?
- What are the major policy issues in governance, management, and finance being faced by the higher education community?
- What degree of impact does the Center hope to achieve in each program area with each constituency? Awareness? Experimentation with change? Institutionalization of change?
- What responsibilities for dissemination functions should different staff members have? For which functions are dissemination specialists needed and which should be among the responsibilities of research personnel?
- In which networks and communities should the Center participate?

2. The Center should not think of itself as a lone operator, responsible for every step of a long term programmatic effort. Rather, it is part of several, including both the higher education and educational research communities. It needs to seek points of leverage with which it can extend its impact. This can be done by working cooperatively with other organizations and by sharing resources.

3. There tends to be a negative relationship between scope of diffusion and strength of impact (Louis et. al; 1984, p. 234). Given the wide variety of potential constituencies, the Center needs to face these trade-offs and decide which to target for impact and which will be satisfied with awareness or intermediate levels of dissemination.

4. The Center should give full consideration to all three major goals of dissemination (Mason, 1982). The term "dissemination" is a difficult one because it tends to connote only the provision of information services. There are two other personnel-intensive modes that need to be considered. Professional development uses people to organize and convey knowledge in terms of the generic problems of specific positions (e.g. deans of academic units). The Center may offer both staff development and graduate training activities that fit this mode. Technical assistance uses people to organize and convey knowledge, or to implement specific innovations. This is an expensive mode of dissemination for which Center resources may not be adequate. However, such programs can be very rewarding by providing "reality testing" of knowledge generated by the research program. The Center should give careful consideration to providing such services on at least a limited basis. Costs might be minimized by providing the services on a contract or fee basis.

5. The Center should base its dissemination plans on the findings of research utilization studies, and it should commit some of its resources to making a contribution to knowledge concerning research utilization, both the practical knowledge needed for its own operation and basic knowledge of more general interest. Examples:

- Research methods, among others, should be used to systematically identify the policy issues that are salient to policy makers in different roles and institutional settings.
- Systematic data should be collected on dissemination programs and activities in order to build a stronger knowledge base for what works best under what circumstances. Part of the Center's evaluation plan that focuses on dissemination should be designed both to be of practical assistance to the Center and to make a contribution to the field of research utilization.

Note that every center and laboratory has a responsibility for dissemination of its R&D. The study of research use should be a prime area for cooperative activity since it is of common interest and has few barriers to cooperation.

Major Dissemination Activities

Major activities concerned with research use can be divided into five general categories as follows:

- Planning
- Public Information
- Staff Services
- Outreach
- Research/Evaluation

Planning. Dissemination activities of the Center should operate under a dissemination plan, updated yearly. This should be part of the

operating plan submitted to the Office of Educational Research and Improvement/Office of Research (OERI/OR).

Public Information. Any publicly funded research center assumes an obligation to explain its mission and describe its activities to the public and its various constituencies. To this end, the Center should publish an attractive brochure and make it available to visitors and at conferences and meetings where presentations are made. Communication channels to the press should be maintained, and press releases should be issued to the educational and general press describing newsworthy reports or events. The capability for giving attention to foreign and domestic visitors should be established.

These public information functions are straightforwarded and presumably non-controversial. Two others are somewhat problematic. A national center naturally attracts a number of inquiries. Handling some of these is simply a fact of organizational life, e.g. inquiries concerning the Center itself, or the sorts of queries that normally find their way into professors' offices. Given that the Center is a national project it might be natural to assume that it has an obligation to act as a general information center in its mission area. However, there is no merit in duplicating the function now filled by the ERIC system or other services.

Similarly, the publication of a newsletter would seem to be a natural development. It may well be warranted, but before this step is taken other alternatives should be carefully explored. For example, it may be possible to have regular columns or inserts in the newsletters of other publications of higher education associations. These different releases could be more narrowly directed than could a newsletter mailed to the varied constituencies of the Center. This would be a good topic to take up with the National Advisory Panel.

Staff Services. The Center should have specialized personnel who can provide support services in the following areas:

Publications

- Design and operate of publications program, including books, monographs, journal articles, occasional papers, newsletters, etc.
- Propose publication policies, e.g. what should be published directly by the Center and what should be published elsewhere.
- Provide editing and graphics services.
- Maintain appropriate mailing lists.

Meetings

- Develop logistics for internal and external meetings (e.g. National Advisory Panel, Technical Advisory Groups, staff development workshops, etc.).
- Prepare and staff displays and presentations at professional conferences.

Reference

- Organize a reference room and a minimal body of reference materials in the Center's mission area, but use other institutional resources wherever possible.

Electronic networking

- Maintain an electronic bulletin board linking Center staff in its four locations.
- Facilitate Center participation in electronic networks maintained by OERI/OR and professional associations, as appropriate.

Reporting

- Assist the Associate Director for Research in monitoring the timely submission of reports and deliverables to OERI.

Cooperative Arrangements

- Develop and maintain cooperative arrangements with other organizations that can help the Center disseminate its results, including ERIC, the Institute for Educational Leadership, higher education associations, and others who disseminate information about higher education.

- Assist research staff in participating in cooperative activities with other OERI supported centers and laboratories.

Technical assistance to researchers on designing dissemination strategies and materials

- Participate with the Associate Director of Research in project reviews to ensure they provide for products and processes that will facilitate effective dissemination of research results and assure that dissemination issues are brought before the RCC.

Outreach. The core of a dissemination plan concerns choices to be made with respect to providing information and services to various constituencies. The specifics are dependent on the Center's view of its mission and the nature of its research program. The Center's programmatic "turf" may be described in terms of a six-cell table as follows:

Stimulus	Program Areas: Governance	Management	Finance
National Trends and External Agencies Affecting Campuses			
Campus Concerns			
Higher Education Governing Theory and Ethical Issues			

Programmatic efforts might be described in terms of the columns, the rows, or the cells. (Not all cells have entries for the first year.) If, in any of these cells clusters of projects have sufficient coherence, then they might also provide a thematic structure for the design of outreach dissemination activities. Such coherence does not always obtain the Center's efforts are essentially project-driven.

The Center's program plan makes an important distinction between two major audiences or constituencies, i.e. policy makers and researchers. In this paper, the plan's treatment of the traditional modes of communication within the research community -- publications, conferences, and networking -- are adequate and best handled by research personnel of each project. The discussion of the Center's mission of serving poliy-makers is organized under three headings: needs assessment, professional development, and technical assistance.

Needs Assessment. A research program tends to "work forward"; a dissemination programs needs to be "planned backwards" (cf "backward mapping" in Elmore, 1979-80). The idea is to start by defining the needs of the constituency to be served and then ask what should be done to meet those needs.

A first step is to segment the audience more carefully. The term "policy-makers" covers a lot of territory. It includes people in many different roles, institutional settings, and levels of the higher education system. The distinction between policy-makers per se and "administrators" is important. The former implies focus on choice among policy alternatives, while the latter suggests the need to be brought up-to-date on the latest in knowledge or conceptual perspectives to assist in managing current activities. Given the need to serve a broad range of policy-makers, it might be useful to select a few subgroups (e.g. presidents of research universities or chairs of state higher education legislative committees) for more intensive effort.

Secondly while the Center seems to define its mission largely in terms of policy research, study of the project descriptions reveals little attention to clear-out policy issues. Most projects indicate that they will address "issues such as . . .", and most of the reports will apparently be primarily descriptive. Systematic efforts to define the policy issues of interest to specific groups within one or more of the nine cells should be undertaken. This would lead to a sharpening of the policy issues or information needs to be addressed in specific projects.

The Center has recognized the importance of the National Advisory Panel and the various Technical Advisory Committees in fulfilling this needs assessment function. Needs assessment should be part of the perspective of all staff whenever they meet with outside groups.

Professional Development. The Center has made a general commitment to developing curricula for staff development programs and for pre-service graduate programs, and a few projects have plans that fall in this area. It is appropriate to work out the details of a professional development plan by addressing such questions as the following:

- What do needs assessments (see above) indicate as primary areas for training in governance, management, and finance?
- What cooperating institutions and associations are interested in working with the Center to develop curricula and offer courses and workshops?
- Can specific types of products be designed which would bring together the results of projects in thematic areas, e.g. a reader, synthesis papers or volumes, etc.
- How might modern audio-visual media be utilized to up-grade curricula?

Technical Assistance. The Center has few, if any, plans for providing technical assistance to policy makers. As noted above, the personnel costs of such assistance are high, although these might be reduced by offering the assistance on a contract or fee basis. Given the applied nature of the Center's mission, some work of this kind is highly recommended in order to provide "hands-on" experience in the issues being studied. Probably the project directors and their associates for specific projects would be in the best position to provide technical assistance. The time is probably not yet ripe for developing specialized technical assistance staff such as are found in elementary/secondary education.

Two projects that would seem to lend themselves to playing a technical assistance role are those on Statewide Board Evaluation and Institutional Planning, but others might be identified as well.

Research/Evaluation. As noted above, the Center should attempt to base its dissemination plan on the findings of utilization research and that it should commit some resources to adding to this body of knowledge. It already has the responsibility for evaluating its own program. Dissemination research might best be handled as part of the evaluation function, for dissemination research can be viewed as the attempt to evaluate the effectiveness of dissemination strategies. Practical kinds of data needed for managing the dissemination program (e.g. questionnaires on reactions of planning workshop participants) might be considered part of the formative evaluation function. Field work which addresses more basic questions of research use might be undertaken as part of the summative evaluation function.

Allocation of Responsibilities for Dissemination

The activities and tasks outline above are quite varied both in nature and skill level required. No doubt as a whole they are beyond the cluster of talents likely to be found in any one individual. Therefore, it is necessary to think in terms of allocating the responsibilities between specialized dissemination positions and research positions, and between regular staff and outside or occasional personnel. It is important to recognize that dissemination in an important institutional function for which all staff have some responsibility. For those tasks, particularly in the public information area, that require mid-level personnel, the Center might well share these positions with other research or administrative units of the School of Education. Presumably the Associate Director for Dissemination and other specialized staff would be located at the University of Maryland. Undoubtedly research staff at other sites will have access to editorial, reference, and other services.

In recruiting an Associate Director for Dissemination there are two options. One would be to define the job in terms of a "vertical cluster" of tasks: essentially those listed in the first column of Fig. 2. Under this option the Center would want to recruit someone with a broad range of communication skills who was willing to work at both higher and lower skill levels. Under this option, the research staff takes a fairly heavy responsibility for dissemination.

The alternative would be to define the job in terms of a more "horizontal cluster." In this case, the Associate Director for Dissemination might take on more of the responsibilities which have been assigned to research staff in Fig. 2. This option probably requires that some of the more routine tasks be assigned to other mid-level staff. This may be quite feasible in a university setting where there is the possibility of sharing such people with other departments and centers. However, under this option it would be necessary to find an individual whose background included not only communication but also strong substantive interest in higher education governance and some knowledge of social science research.

Figure 2

ALLOCATION OF DISSEMINATION RESPONSIBILITIES

	POSITION			
	Associate Director	Research Staff	Consul-tation	Evalu-uation Team
Planning	X	Y	Y	Y
Public Information				
o Center brochure	X			
o Press release	X			
o Visitor services	X	Y		
o Answering public inquiries	X			
o Newsletter	X			
Staff Services				
o Publications	X			
o Meetings	X			
o Reference	X			
o Electronic Network	X			
o Reporting	X			
Cooperative Arrangements				
o For Research	Y	X		
o For dissemination	X			
o Tech Assistance for researchers	Y		X	Y
Outreach				
o Needs Assessment	Y	X	Y	Y
o Professional Development				
a. Staff Devel.	Y	X		
b. Graduate Educ.	Y	X		
o Tech. Assistance	Y	X		
Research/Evaluation				
o Practical/formative	X			Y
o Basic/summative	X			Y

Key: X = primary responsibility Y = secondary responsibility

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ON LEARNING TO ADD

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ON LEARNING TO ADD

The primary mission of the National Center for Postsecondary Governance and Finance is to conduct research which is useful to colleges and universities. To be genuinely useful such research must illuminate or alleviate practical problems faced by college and university administrators, their faculties, and other stakeholders in the success of higher education. For example:

- What strategies of educational planning have been most successful in improving the cost-effectiveness of academic programs? Do these strategies work equally well in small and large institutions? What strategies are most appropriate in a particular context?

- How can colleges and universities develop more effective forms of collaboration with industry? Do university-industry partnerships facilitate advances in scientific R&D, while at the same time creating new sources of income? What form of collaboration is best suited to a particular context?

- Is the termination of general revenue sharing likely to create large deficits for state-supported colleges and universities? What is the probable magnitude of these deficits in different institutions? Which compensatory financial options are most appropriate under particular circumstances?

In principle, these and similar practical problems may be illuminated or alleviated through directed research. To achieve this end, however, it is not sufficient simply to conduct high-quality research. High-quality research also must contribute to the problem-solving capacities of colleges and universities.[1]

Analysis

The problem-solving capacities of colleges and universities can be enlarged through two modes of inquiry. One mode is educational policy

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[1]An extensive literature demonstrates that good research does not necessarily contribute solutions for real-life problems. See, for example, C.E. Lindblom and D. Cohen, Usable Knowledge (New Haven: Yale University Press, 1979); C.H. Weiss, Social Science Research and Decision Making (New York: Columbia University Press, 1980); G. Beal et. al., Knowledge Generation, Exchange, and Utilization (Boulder: Westview Press, 1986).

analysis, while the other is education policy research.[2] Contrasts between these two modes of inquiry are essential to the Center's present and evolving problem-solving role.

- o Source of Problems. Policy analysis illuminates or alleviates problems faced by a specific client (e.g., the president of a rural community college). Policy research addresses problems faced by general classes of potentially interested clients (e.g., major research universities).

- o Audience. Policy analysts communicate findings to a specific audience (e.g., the special assistant to a college president). Policy researchers communicate with a general audience (e.g., an association of college admissions officers or editors, reviewers, and readers of a professional journal).

- o Time Frame. The time-frame of policy analysts may range from several weeks to months (e.g., a prompt response may be essential to brief administrators prior to annual legislative appropriations). Policy research has a time-frame ranging from several months to years (e.g., a book, monograph, or report typically requires three years from inception to publication and distribution).

- o Scope. In policy analysis, observations are based on the synthesis of existing sources of information (e.g., NCES data archives, periodicals, key informants). Policy research requires observations based on new sources of information (e.g., ethnographic or sample survey data).

- o Methods. Policy analysis involves sound logical reasoning, comparison of contending arguments, and simple arithmetic (e.g., a well-reasoned narrative backed up by tables). Policy research, by contrast, involves a range of complex methods (e.g., benefit-cost analysis, causal modeling, linear programming).

- o Products. The typical products of policy analysis are the policy issue paper, policy options paper, policy memorandum, and policy news release. The typical products of policy research are the research report, research monograph, scholarly book, and journal article.

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[2]The distinction between policy research and policy analysis is based on P.J. Cook and J.W. Vaupel, "What Policy Analyst Do: Three Research Styles," Journal of Policy Analysis and Management 4.3 (Spring 1985), 427-28; and W.N. Dunn, "If Educational Policy Analysis Is the Solution, What is the Problem? Options for Regional Labs," Southeast Educational Improvement Laboratory, Research Triangle Park, North Carolina, March, 1987.

Policy analysis has a greater likelihood of making specific, direct, and immediate contributions to problem-solving capacities of colleges and universities. These contributions may range from improving conceptual capacities to formulate and diagnose problems to improving instrumental capacities to identify, develop, and implement specific new policies.[3] Policy research has a greater likelihood of making general, indirect, and delayed contributions to problem-solving capacities of colleges and universities. These contributions also may be conceptual as well as instrumental.

Development

Educational policy analysis is but the first step in improving problem-solving capacities. Analysts also must communicate the results of their inquiries, which demands skill in the development of policy-relevant documents. Among the most important of these documents are:

- The Policy Issue Paper. This is the most general of policy-relevant documents produced by an analyst. Policy issue papers provide answers to one or more of the following questions: In what different ways may the policy problem be defined? What is the scope and severity of the problem? How is the problem likely to change in future months or years? What goals and objectives should be pursued to solve the problem? What major policy alternatives should be considered as potential solutions for the problem? To what extent have previous efforts to solve the problem been successful? What credible policy options are available? What options should be recommended? Analysts are rarely requested to answer all these questions. Instead, they are typically asked to provide answers to more limited questions; for example, questions involving the formulation of a problem, the evaluation of past policy performance, or the comparison of available policy options.

- Policy Memoranda. Policy memoranda draw upon the conclusions and recommendations of a policy issue paper. Sometimes policy memoranda respond to or challenge these conclusions and recommendations, or their assumptions. Lengthy policy memoranda are similar to policy issue papers; only the form and style of communication differ. Short policy memoranda are useful for communicating the major conclusions or recommendations of a policy issue paper, but without providing the full text.

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[3]In other words, policy analysis may perform "conceptual" as well as "instrumental" functions which have been distinguished at length in studies of research utilization. For a review of these and other distinction see W.N. Dunn, "Measuring Knowledge Use," Knowledge: Creation, Diffusion, Utilization 5,4 (1983): 120-133.

- Policy Briefs. These are abbreviated versions of full policy issue papers. Essentially, a policy brief is an extended executive summary, often including key references, but excluding appendices. Policy briefs are useful and appropriate when the analyst wishes to communicate a concise summary of the larger policy paper, but without providing the full document.

- Policy News Release. In dealing with representatives of the mass media, analysts are frequently asked to provide a concise summary of the major conclusions or recommendations of a policy issue paper. Such requests are frequently the product of initiatives taken by clients who contact the media in order to publicize the contents of a paper. A policy news release may assume the form of an abbreviated executive summary. For example, a policy news release may identify the author(s) and client(s) of a policy issue paper and describe only the recommendations included in an executive summary. In cases where the policy issue paper and executive summary have other goals--for example, to describe policy options--the news release would contain conclusions rather than recommendations.

The several variants of policy-relevant documents described above call attention to the fact that there are many audiences for the same policy-relevant information. Clients are frequently only one audience; and effective communication with different audiences may require different policy-relevant documents.[4] For example, policy news releases are most appropriate for representatives of the mass media and public interest groups. Executive summaries and policy briefs, by contrast, are more suitable for communicating with policymakers and other analysts. The appropriateness of a policy-relevant document is governed by the characteristics of particular segments of the audience and their informational needs.

The development of policy-relevant documents requires different kinds of skills than those needed to conduct policy analysis. The development of policy-relevant documents requires skills in synthesizing policy-relevant information; organizing the written text into logically connected sections; translating specialized and sometimes esoteric language into the varied languages of clients and other stakeholders; simplifying complex processes of scientific and technical reasoning into clearly stated arguments; displaying essential information in the form of tables, graphs, and figures; summarizing key background information, conclusions, and recommendations in the form of an executive summary; and appending the most relevant support documents to the text of the paper.

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[4]See A. Meltsner, Policy Analysts in the Bureaucracy, Rev. Ed. (Berkeley: University of California Press, 1986).

Dissemination

Although different educational policy documents may be developed for different audiences, these documents must be disseminated to intended beneficiaries. Just as the process of analyzing policies is different from developing documents, so is the process of disseminating these documents different from both. The process of dissemination involves:

- o Transmitting. Policy-relevant documents are transmitted to clients via letters of transmittal.
- o Forwarding. Copies of policy-relevant documents are forwarded to other stakeholders.
- o Calling. Clients and other stakeholders are contacted by telephone in order to clarify or call attention to documents.
- o Meeting. Clients and other stakeholders are met face-to-face to clarify or call attention to documents.
- o Briefing. Clients and other stakeholders are briefed in meetings scheduled to present the contents of documents.
- o Conferencing. Clients and other stakeholders confer in meeting schedules to exchange and discuss the contents of documents.

The availability of advanced computer technology and satellite communication makes it possible to engage in the above activities as part of computer networks. For example, requests for policy-relevant information, together with responses in the form of policy papers, are transmitted between policymakers and analysts via telecomputer networks. Electronic mail and electronic bulletin boards are replacing standard letters, memoranda, telephone calls and meetings, while interactive tele-briefings and tele-conferences are broadcast via microwave and satellite communications. Analysts are now able to access computerized data bases which contain policy papers and reports, model legislation, and statistical series useful for conducting policy analyses at the national, state, and local levels. While there is no doubt about the rapid development of new communications technologies, it is not yet clear whether these technological advances are improving the conduct of policy analysis and the development and dissemination of policy-relevant documents.

Although there are no specific rules or criteria for effective dissemination, we do have some general guidelines:

- o Audience Segmentation. Although we cannot anticipate all relevant stakeholders who will be or should be part of the audience, thinking strategically about the composition of the audience is essential for effective communication. There are many stakeholders to be reached. Effective dissemination demands audience segmentation.

- Contextual Mapping. Each segment of the audience is likely to differ in ways that will affect the dissemination of policy analysis. Particular audience segments tend to have distinctive frames of reference, that is, organized sets of assumptions and standards of assessment which shape their perception and evaluation of policy-relevant information. Policy-relevant documents should be responsive to these competing criteria.

- Translation. The language of policy analysis is not necessarily the language of the audience. Different audience segments with different reference frames use contrasting languages. Analytical and technical terms may be fully appropriate for audiences who are producers or regular consumers of professional policy analysis. But other audiences require more readily understood terms and clear explanations or analytic and technical terms.

- Product Differentiation. Policy-relevant products may be differentiated according to the audience, its particular interpretive structure, and its distinctive language. Multiple documents may be necessary for different audience segments. Product differentiation involves the development of documents with alternative formats and lengths--for example, a full policy paper as contrasted with a news release. The language, style, and types of arguments also may be adapted to a particular audience without compromising the methodological and substantive integrity of a document, including its conclusions and recommendations.

- Medium Differentiation. Media for disseminating policy-relevant documents may also be differentiated. Simply transmitting a document may be insufficient; telephone conversation, face-to-face meetings, formal briefings, and conference are also important communications media. The establishment of computer networks which permit electronic mail, electronic bulletin boards, and interactive computer conferencing are similarly important as alternative media.

Learning to (A)nalyze, (D)evelop, and (D)isseminate

The aim of educational policy analysis is to improve educational policies. But good policy analysis does not speak for itself; it must be developed into policy-relevant documents and disseminated to various audiences before it can contribute to the problem-solving capacities of colleges and universities. Although it would be highly useful to have a well-tested and codified body of rules for performing analysis, development, and dissemination, no such body of established rules presently exists. Indeed, analysts, developers, and disseminators are in much the same position as clinical practitioners within such older

professions as clinical psychology and psychotherapy.[5] Educational policy analysis and other problem-solving disciplines have yet to develop a sound theory of applications which would specify the conditions under which analysis are most likely to illuminate or alleviate practical problems.[6]

Under these conditions, where no well-tested and codified body of rules is available for improving practice, we must be content with inductive learning strategies which permit continuous assessments of the practical impact of analysis, development, and dissemination. The logic and procedures of quasi-experimentation are particularly well-suited to this task, since quasi-experimentation is expressly designed as an inductive learning strategy in complex practice settings where simple deductive theories are inapplicable.[7]

Any particular effort to analyze, develop, and disseminate may be regarded as a practical experiment and represented as the functional equation

$$PI = f(A, D, D) + Error$$

where PI represents a presumed practical impact, A represents a particular form of policy analysis, D represents a variation in a policy-relevant document, and (the second) D represents a particular dissemination strategy. Error stands for that part of PI which cannot be accounted for or explained by A, D, and D.

An expanded model of relationships between analysis, development, and dissemination is presented in Figure 1. The ADD Model explicitly incorporates analysis, development, and dissemination as key manipulatable features of practical problem-solving. The ADD Model also draws attention to the quintessential practical aim of analysis, development, and dissemination, which is to learn how to add to problem-solving capacities.

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[5]See B. Fischoff, "Clinical Policy Analysis," in W.N. Dunn (ed.) Policy Analysis: Perspectives, Concepts, and Methods (Greenwich, CT: JAI Press, 1986).

[6]See C.H. Weiss, Social Science Research and Decision Making, Ch. 1 and W.N. Dunn, "Evaluating the Effects of Policy Analysis: Toward a Theory of Applications," in S.S. Nagel (ed.) Public Policy Analysis and Management (Greenwich, CT: JAI Press, 1986).

[7]See T.D. Cook and D.T. Campbell, Quasi-Experimentation (Boston: Houghton Mifflin, 1979).

FIGURE 1

THE ADD MODEL

Analysis

- o Problem Structuring
- o Forecasting
- o Recommendation
- o Monitoring
- o Evaluation

Contents of Policy Making

- o Problem Setting
- o Policy Formulation
- o Policy Adoption
- o Policy Assessment

Policy-Relevant Information

- o Policy Problems
- o Policy Alternatives
- o Policy Actions
- o Policy Outcomes
- o Policy Performance

Dissemination

- o Transmitting
- o Copying
- o Calling
- o Meeting
- o Briefing
- o Conferencing

Development

- o Synthesizing
- o Organizing
- o Translating
- o Simplifying
- o Displaying
- o Appending

Policy-Relevant Documents

- o Issue Papers
- o Memoranda
- o Executive Summaries
- o Briefing Papers
- o Visual Displays
- o Appendices

We must recognize that the practical impact (PI) of analysis (A), development (D), and dissemination (D) is likely to be ambiguous, uncertain, or equivocal. This equivocality is due in part to characteristics of analysis (A), which involves variations between and within producers, products, and procedures. In order to infer that an observed practical impact, PI, is a consequence of A, policy analysis, we must be able to learn which features of policy analysis are causally efficacious. For example, PI may be due to:

- o Producer Variability. The analytic styles of policy analysts vary. Some analysts are "technicians" while others are "politicians" or "entrepreneurs."[8]

- o Product Diversity. The products of policy analysis may range from memoranda and policy briefs to lengthy policy papers, reports, and studies. Although policy analysis is supposed to yield recommendations for actions, available evidence suggests that the content of products varies widely. For example, books, articles, and reports produced by a sample of thirty policy-oriented research institutes display two markedly different orientations, the "scientific" and "humanistic."[9] A content analysis of 181 randomly sampled articles published in in leading policy journals from 1975 through 1980 suggests, among other findings, that products display two broadly divergent orientations: "quantitative-empirical" and "rhetorical-discussive."[10]

- o Procedural Variability. Procedures employed to conduct policy analysis are also variable. There is little working consensus among practitioners about the procedures that are most appropriate:[11] nor is there sufficient evidence to show that any preferred set of procedures (e.g., cost-benefit analysis) is faithfully applied in contexts of practice where practitioners must perform a variety of essential non-analytic functions: instill confidence in clients, ask questions to obtain sensitive or controversial information, manage conflicts, and crises, understand what is not being said, avoid the imposition of the

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[8]See Meltsner, Policy Analysts in the Bureaucracy.

[9]Pamela Doty, "Values in Policy Research," in W.N. Dunn (ed.) Values, Ethics, and the Practice of Policy Analysis (Lexington: D.C. Heath, 1983).

[10]J.A. Schneider, N.J. Stevens, and L.G. Tornatzky, "Policy Research and Analysis: An Empirical Profile, 1975-1980," Policy Sciences 15 (1982): 99-114.

[11]G.D. Garson, "Policy Science: A Quarter Center of Progress?" in Dunn (ed.) Policy Analysis: Perspectives, Concepts, and Methods (Greenwich, CT: JAI Press, 1986).

analyst's own values and perceptions, and devise strategies for interactive problem solving.[12]

The process of disseminating policy-relevant products is also variable. While a linkage system unites producers and users,[13] the aims, attitudes, and perceptions of users are seldom congruent with those of producers. The professional frames of reference of users and producers often diverge, one consequence of which is the division of the linage system into two insulated communities.[14] Differences in professional reference frames reflect conflicting standards for assessing the truth, relevance, and cogency of knowledge gained through policy analysis.[15] These conflicting standards of assessment appear to be correlated with differences in the structure of communications networks and the distribution of bureaucratic power and the types of strategies chosen to communicate knowledge.[16]

An essential measure of practical impact (PI) is whether results of policy analysis have been utilized. Although the utilization of policy-relevant knowledge is frequently treated as a discrete choice involving a decision to accept or reject the conclusions or recommendations contained in a policy-relevant document, the process of knowledge utilization is complex. The utilization of policy analysis has at least three major dimensions:[17]

- o Composition of Utilization. Policy analysis is utilized by individuals as well as organizations. The concept of an

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[12]Fischhoff, "Clinical Policy Analysis," p. 35.

[13]See R.G. Havelock, Planning for Innovation (Ann Arbor: Institute for Social Research, 1973).

[14]N. Caplan, "The Two-Communities Theory and Knowledge Utilization," American Behavioral Scientist 22 (1979): 459-70.

[15]See, e.g., Holzner and E.M. Fisher, "Knowledge-in-Use: Considerations in the Sociology of Knowledge Applications," Knowledge: Creation, Diffusion, Utilization 1 (1979): 219-44; C.H. Weiss and M.J. Bucuvalas, "Truth Tests and Utility Tests: Decision Makers' Frames of Reference for Social Science Research," American Sociological Review 45 (2980): 302-12; W.N. Dunn, "Reforms As Arguments," Knowledge: Creation, Diffusion, Utilization 3 (1982): 293-326; and D.T. Campbell, "Experiments As Arguments," Knowledge: Creation, Diffusion, Utilization 3 (1982): 327-41.

[16]See, respectively, E.M. Rogers and D.L. Kincaid, Communications Networks (New York: Free Press, 1981); and R.F. Rich, Social Science Information and Public Policy Making (San Francisco: Jossey-Bass, 1981).

[17]Dunn, "Measuring Knowledge Use."

"improved decision" implies that utilization is a process of individual decision making. By contrast, the concept of utilization as "enlightenment" or "collective learning" affirms that the utilization of policy analysis is a process.

- o Expected Effects of Utilization. The utilization of policy analysis has mental as well as behavioral effects. Distinctions between these two kinds of effects captures contrasts between "conceptual," utilization, on one hand, and "instrumental" utilization on the other. Conceptual utilization refers to change in the ways that individual and collectives think or feel about practical problems and their solutions. Instrumental utilization, by contrast, denotes observable changes in individual or collective actions, for example, changes in a legislators' publicly espoused position on an issue or changes in the allocation of resources in a university. Thus, the expected effects of utilization may be individual or collective in composition.

- o Scope of Utilization. The utilization of policy analysis may be specific or general. The concept of "ideas in good currency"[18] is general in scope, while the concept of adopting a policy recommendation is specific. The scope of utilization may be viewed as gradients along a scale which range from being aware of or acquainted with conclusions, options, or recommendations to being able to explain them to others or put them into effect.[19] The same scope of utilization, whether general or specific, may be individual or collective in composition and have conceptual or behavioral effects.

These three intersecting dimensions--composition, expected effect, scope--create new opportunities to assess the practical impact of analysis, development, and dissemination.

Returning to the sources of variability discussed above [PI = f(A, D, D,) + Error] we can now specify potential errors committed when we assess the practical impact of analysis, development, and dissemination. These errors occur when an observed practical impact is falsely attributed to analysis, development, or dissemination when, instead, some other factor is responsible for the observed practical impact (see Figure 2).

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[18]See D.A. Schon, The Reflective Practitioner (New York: Basic Books, 1983).

[19]See F. Machlup, Knowledge: Its Creation, Distribution, and Economic Significance (Princeton: Princeton University Press, 1980).

FIGURE 2

SOURCES OF ERROR IN ASSESSING PRACTICAL EFFECTS OF ANALYSIS, DEVELOPMENT, AND DISSEMINATION

Error

Methods-in-Use. Methods actually employed by analysts, apart from those which they formally espouse, provide alternative explanations or practical impacts. For example, the putative practical success of cost-benefit analysis is actually due to the analyst's skills in managing conflict and building collaborative relationships with policymakers.

Multiple Analytic Interference. Multiple analytic procedures are jointly applied, making inferences about practical impact atypical of the separate application of a given procedure. For example, no practical impact is observed when analysts employ multiple methods, even though a single method may have resulted in a positive effect.

Materials Bias. The sequence of presenting materials, the format for their presentation, or the process of translating methods and conclusions, rather than the conclusions of policy analysis, provide alternative explanations of practical impact. For example, the translation of scientific concepts into ordinary knowledge may govern practical impacts.

Solution-Regression. A policy analysis is often commissioned when problems are most severe ("the problem must get worse before it gets better"), creating pressures for solution that do not depend on policy analysis. Analysis may be an effect of a policy problem which is so severe that it is bound to improve without analysis.

Analytic Structure. The structure of analytic roles, rather than methods and conclusions, provides an alternative explanation of practical impact. For example, the influence of "entrepreneurs," rather than the substantive conclusions reached through analysis, explains practical impact.

Multiple Interpretation Interference. The interpretations of producers and users are sufficiently different that practical impacts cannot be separated from their interpretation. For example, weak or non-existent impact may be due to conflicting reference frames for interpreting analyses, not to conclusions of analyses themselves.

Latent Function. The latent functions of policy analysis provide alternative explanations of impact. For example, latent functions of political control, political ammunition, or program subversion, rather than the conduct of analysis, explain practical impact.

Error

Linkage Structure. The pattern of linage roles, dissemination routines, and institutional incentives, rather than the conduct of analysis, provide alternative explanations of impact. For example, the incentive system of analysts may be oriented towards professional rewards, while the incentive system of policymakers may be oriented towards institutional survival.

Dimensionality Bias. One or more dimensions of utilization (e.g., composition) are confounded with another dimension (e.g., expected effects or scope), making inferences about practical impact atypical of the separate occurrence of a single dimension. For example, practical impact may be assessed in terms of expected effects which are specific in scope, leading to claims that no practical impact occurred, when in fact utilization did occur in the form of general effects.

SOURCE: Adapted from Dunn, "Assessing the Impact of Policy Analysis: Toward a Theory of Applications" (1986).

Conclusion

There is no well-tested and codified body of rules for doing educational policy analysis and developing and disseminating documents based on results on this analysis. Under these conditions the best we can do is to use quasi-experimentation and other inductive learning strategies which permit us to learn from our errors. But we need to be able to know an error when we see one, relating this knowledge to variations in analysis, development, and dissemination. Otherwise learning will be random, not systematic; it also will be costly.

Learning to ADD (analyze, develop, disseminate) requires a willingness to confront the kinds of errors described above. Most importantly, it requires an acknowledgement that we do not know--except in the most general and obvious sense--how to conduct research and analysis which illuminates or alleviates practical problems of postsecondary education.

EFFECTIVE DISSEMINATION IN A NATIONAL EDUCATION RESEARCH CENTER

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EFFECTIVE DISSEMINATION IN A NATIONAL EDUCATION RESEARCH CENTER

The effective dissemination of research findings and research products is obviously a major concern for a national education research center. It is a concern that the Johns Hopkins Center for Research on Elementary and Middle Schools has been grappling with for about 20 years (previously as the Johns Hopkins Center for Social Organization of Schools).

Over this length of time, the Center has employed a large number of dissemination outlets to try to get its research findings and products into use by schools and districts and into used by education policymakers. We have, as time progressed, incorporated these strategies and outlets into a general Dissemination Plan -- a categorization of the methods and the outlets that are generally used to disseminate Center research findings and products.

Part I of this paper presents this Dissemination Plan. It describes the dissemination methods and channels use by the Hopkins Center and the rationale for their use, and provides some examples of their effectiveness. It will not, of course, be directly transferable to the needs of the Maryland Center, but should provide some assistance in developing dissemination strategies and an effective dissemination program.

Part II of this paper comments on a variety of the issues faced by a research center in the initial stages of establishing effective dissemination policies. These comments represent "craft knowledge" -- opinions based on experience -- and are presented in a Question-Discussion format.

The Hopkins Center Dissemination Plan

The Center has a strong background in dissemination and public information and has developed, over the years, a consistent set of institutional activities that are applied to each research project and tailored to meet each project's potential for dissemination to researchers, practitioners, and policy makers in education.

The Center's work produces two types of materials that require dissemination -- research findings and research products. Findings are information and new knowledge derived from research which can be used by others to enhance their own research, make policy decisions, improve their school practices, and so on. All Center research projects produce findings to be disseminated. Some Center projects, based on their findings, proceed to develop prototypic products -- more specific sets of processes and/or materials for direct use by practitioners to improve their schools and classrooms. Thus the Center's dissemination activities focus on two areas: (A) dissemination of research findings, and (B) dissemination of research products.

Dissemination of Research Findings

A national survey of school uses of microcomputers produces reams of pertinent data about the numbers of micros in schools, who's using them, how they're being used, what effects they're having on students. A re-analysis of a time-on-task equals greater achievement for most students. Another study finds that students who follow a "New Basics" curriculum in high school show greater achievement - but only if they're high achievers to begin with.

These are a few of the research findings in recent Center studies. They have implications that bear directly on the work of two general audiences -- education researchers, and education practitioners, including policy makers. The general dissemination plan of the Center incorporates specific mechanisms to reach each of these audiences.

Dissemination to the research community. Research findings need to be disseminated to other researchers who can react to the findings, incorporate them in their own research, replicate or refine them, or challenge them, and generally build upon them to eventually produce a coherent set of knowledge in a particular topic area. To accomplish this, researchers need full reports of the research to examine carefully for theoretical, methodological, and interpretive accuracy and completeness. The Center disseminates full reports of its research to social scientists and education researchers through direct mailing, journal publication, monographs, book chapters, books, research conferences, and the ERIC system.

- Research findings are reported first in the Center Report Series. Each report describes the study conducted, the method, the results, and the implications of the results for further research and educational practice. The reports are mailed to a targeted mailing list of: a) preeminent educational, psychological, and sociological researchers; b) OERI and other Department of Education personnel; c) Maryland and Baltimore City education research personnel and administrators; d) the network of educational laboratories and research centers and other education research institutions; and e) large educational research library departments. More than 350 Center educational research studies have been disseminated through this series.

- Research findings are published in scientific journals such as American Educational Research Journal, Journal of Educational Psychology, Sociology of Education, Review of Educational Research, Elementary School Journal, and many other refereed professional journals. This dissemination outlet is probably the most effective for reaching other researchers and influencing the conduct and direction of educational research. It is a key aspect of scientific communication.

- When program research produces a significant body of studies or work in a specific area, the Center seeks commercial publication in book form to disseminate the information. Books authored or edited by Center researchers have been published by Academic Press, Longman, D.C. Heath/Lexington, NEA publishing, Prentice-Hall, Plenum, and The Johns Hopkins University Press. Center researchers have achieved commercial publication of sixteen books, most of which are syntheses and summaries of original research accomplished in a specific area.

- Research findings are prepared by Center researchers for publication as chapters in commercial textbooks, annual compilations, literature syntheses, and so on, and more than 50 such chapters have been published in the past five years.

- Research findings are presented at national and regional conferences of researchers and practitioners. Center staff present their studies annually at conventions of the American Educational Research Association, American Sociological Association, and the American Psychological Association; and also deliver invited presentations each year at local, regional, national, and international conferences.

  Presentations at these conferences allows Center researchers to reach and influence a large number of other researchers and practitioners whose interests lie in similar areas. In turn, the Center research is influenced by the work of other presenters. Thus presentation at these conferences and attendance at other conference sessions is often analogous to holding a national or regional conference on a specific theme without the expense that such a conference would entail. This is especially true of symposia designed by Center researchers and presented at AERA, APA, and ASA each year.

- The Center places its research reports into the ERIC system for dissemination. The importance of the ERIC system as a dissemination mechanism for education research is often underestimated. The system is a major source of research information for many groups, and often the only source consulted. ERIC searches of the literature are undertaken by researchers seeking information on research topics of interest, and by administrators and students in education courses seeking information about a problem area. Through ERIC, the Center research findings are brought to the attention of these groups. Also, Center reports entered into ERIC contain full references that direct users of these reports to other journal articles and books of interest.

Dissemination to practitioners and policy makers. Education practitioners and policy makers have neither the time, inclination, nor

technical interest to delve into full reports of research studies and their findings. For this audience, summaries and syntheses of research findings are disseminated through news releases and articles for the education media and professional and association publications. In addition, specific interpretive articles that report the findings more extensively and interpret their implications for the specific audience are prepared for these publications, either by Center staff or by editors assigned by the publications. The Center also disseminates interpretation and implications of its research through its own Report, which goes to over 8,000 education personnel ranging from district superintendents to school of education deans, and through the publication of targeted newsletters on specific topics (School Uses of Microcomputers, Summary of Teacher Practices of Parent Involvement, STL Newsletter). Also, the Center works closely with the ERIC Clearinghouse on Elementary Education to produce summaries of its research findings in appropriate formats for the Clearinghouse.

The breadth of this dissemination activity, which is conducted for each Center research project, is best illustrated by an example -- the dissemination of research findings for the School Uses of Microcomputers project, which began in early 1982. Dissemination activities have included responding to over 1,500 requests for technical research reports; production of 11 journal articles and a book chapter; a monograph published by the International Council for Computers in Education; inclusion of the research in the ERIC system; articles written specifically for the ERIC Clearinghouse MicroNotes newsletter; conference presentations at AERA; invited presentations at the National Educational Computing Conference, Computers in Education '83, the World Conference of Computers in Education, a Phi Delta Kappan Conference; publication of research findings in Education Daily, ERS Bulletin, PTA Today, Education Week, Education Times, Report on Education Research, Nation's Schools Report, Education Marketer, in various state and local education newsletters, and in Time Magazine, The New York Times, Washington Post and numerous other large-city newspapers; appearances on CBS News and the PBS series on educational computing; and extensive interpretive articles published in NASSP Bulletin, Classroom Computer Learning, College Board Review, ETS Focus Magazine, Creative Computing, Electronic Learning, and others. In addition, two extensive articles were published in the Center's Report, and a special communications project was developed (School Uses of Microcomputers Newsletter) to report research findings from the project as they developed. The initial mailing list of the Newsletter was approximately 6,000 subscribers, due to requests to be put on the mailing list.

The dissemination activity for each project is documented by a Dissemination Profile which lists the types of information disseminated, the types of media, the specific media, the types of audiences reached, the potential number of persons reached, and the timing of the dissemination activity.

These diverse dissemination activities are conducted for all Center research projects, and produce extensive coverage of research findings

that are of interest to and have practical uses for practitioners. This activity functions as a communication system that increases awareness of the value of research to educators and the general public and provides the information to specific audiences who will be able to use it. The effectiveness of these dissemination activities is illustrated by the Center's record of publication of research findings with five of the major general education media publications: Education Daily (and its affiliates), Education Week, Education Times, Education USA, and ERS Bulletin. In 1983-84, reports of our research findings appeared in those publications 32 times. In addition, in 1983-84, 20 reports and interpretive articles of our research findings appeared in targeted association publications (ASCD Update, NASSP News Leader, AFT American Educator, National School Boards Journal, Phi Delta Kappan, PTA Today, etc.).

Dissemination of Research Products

Based on its research, the Center may develop prototypic materials and processes, and conduct an active dissemination program to help schools use these products. Two classroom instructional processes resulting from Center research -- Student Team Learning (STL) and Team-Assisted Individualization (TAI) -- are being used in approximately 10,000 schools by 30,000 teachers, thus affecting about a million students. In additional, more than 200,000 copies of the Quality of School Life scale have been distributed to school district personnel for measurement use. The recently developed Effective School Battery (ESB) is already in use by about 100 schools.

The strategy of the Center to disseminate educational processes and measurement instruments that can be used in schools and classrooms is to coordinate with existing dissemination outlets that offer nationwide coverage and expertise. The Center ties its products into commercial publishers' marketing capabilities, the National Diffusion Network, the Regional Laboratories program of the Office of Educational Research and Improvement, and other federal and state financed dissemination outlets. Also, the Center coordinates a nationwide system of certified trainers in conjunction with its dissemination of Student Team Learning and Team-Assisted Individualization.

1. Commercial Publication -- The Center seeks commercial publication and marketing of its educational processes and instruments when appropriate. The Center's TGT program was published and marketed by Argus Communications, Inc.; The Quality of School Life Scale has been published by Riverside Press (a subsidy of Houghton Mifflin); Mastery Education Corporation is publishing and marketing the Team-Assisted Individualization (TAI) math program, and the Effective School Battery is published by Psychological Assessment Resources, Inc.

2. National Diffusion Network (NDN) -- the NDN consists of facilitators in each state who assess school district and teacher needs within their states and suggest the use of educational products which meet those needs. The products are those validated by the Office of

Education-Office of Educational Research and Improvement Joint Dissemination Review Panel as having proven education effects.

The Center followed OERI guidelines to validate the Student Team Learning and Team-Assisted Individualization processes in order to put them into this network. This network participation facilitates the Center's awareness activities, teacher training, and follow-up throughout the nation. Dissemination of the STL process was funded through the NDN for five years; the dissemination of the TAI process has been funded for two years. We will seek validation and dissemination through the NDN for many of the classroom instructional processes that will be developed in Center work in the next five years.

3. OERI Educational Laboratories -- The Center's educational products are placed into the national dissemination network formed by the educational laboratories of OERI. Very good dissemination of research findings and products have occured through some laboratories, and much less through others. The Center works closely with the OERI effort to make the Lab-Center collaboration more effective.

4. Other outlets -- The Center also initiates contact with and coordinates dissemination activities with other appropriate federal and state outlets that have dissemination capability. These include Desegregation Assistance Centers, state department of education dissemination projects, NEA and AFT, and other education associations.

The general dissemination plan described above incorporates a multitude of specific activities. The activities are primarily the responsibility of the Associate Director who collaborates with Center program and project directors to identify and carry out the activities appropriate for each research project.

Questions/Discussions on Dissemination Issues

A national education research center that is in the early stages of developing a dissemination program faces certain critical issues. This section of the paper, contains some personal opinions -- based on experience and observation -- about these issues.

Should the Center have a full-time dissemination person? Absolutely. The Center should have one high-echelon person whose responsibility is to work day-in and day-out with all Center research projects, identify the audience and dissemination needs of each project, set up a Center-wide office to respond to information requests, maintain inventory, handle publication of technical reports, newsletters, and special communications; write news releases, articles, research summaries; collaborate with other organizations and organizations and associations and so on.

Some of these activities and responsibilities could be handled by bringing in consultants; some could be handled by working with a public relations firm; some could be handled by a lower echelon writer/editor

position; some could be handled by research personnel. But all can be handled by a full-time high-echelon dissemination person.

Should the dissemination person do research on dissemination? No. Different skills and mental attitudes are required in doing dissemination and doing research on dissemination. Communication skills (especially strong writing skills), a cooperative and helpful attitude, and a "small ego" are needed by the disseminator, who must clearly interpret and promote other people's work and careers for the good of the Center. These are not the skills required of a good researcher.

The dissemination person will, of necessity, do research in the sense of documenting dissemination activities and evaluating the results, but this is Center-specific and project-specific.

What methods of dissemination would be best for the Center to use? The quick and dirty answer to this question is -- all of them. And this is a serious answer. It may take time to get a variety of dissemination methods and outlets established, but one flows into another and interactions abound.

A beginning Center should think in terms of two basics -- Center technical reports, and a Center newsletter. From these two basics, a full-fledged dissemination program can be built.

> Technical Report Series. The description and findings of each center research project should be published in detail in a technical report that provides the information base for dissemination. This report links directly to research conference presentations of the same information by the researcher, which may occur before or after the report; placement of the information in ERIC, which involves time for processing; and official/commercial publication of the same information as a journal article or book chapter, which occurs long after the original research is conducted. The Technical Report Series offers two great advantages -- timely publication of the research, and a base of information to be disseminated by the Center. At the same time, the Center's production of technical reports is inexorably linked to dissemination through research conferences, the ERIC system, journal article publication and book chapter publication -- all of which combine to get research information out in a credible form to the research community and professional educators.
>
> Center Newsletter. This should be the major vehicle for officially telling the education public what the Center's research has found. Newsletter is not a good term -- it should be a report or research findings, a presentation of information that readers can apply or at least use to broaden their point of view.

Here I'll parrot what everyone says -- the newsletter articles should be clearly and concisely written, free of unnecessary jargon. But

remember that educators are the audience, and some jargon communicates clearly and directly.

As with the Technical Report Series, the newsletter publication interacts with other dissemination activities. An article prepared for the newsletter, with little rewriting, becomes a press release to the education media. It becomes a summary of findings to be used by ERIC. It forms the base for a lengthier article written for an education association magazine. It becomes a summary to be submitted to the R&D Report, the dissemination arm of the Regional Laboratories. It becomes an expanded piece to be sent out direct mail to a special-interest group.

Thus a beginning national research center, by concentrating on the production of a Center Report Series and a Center newsletter that presents research findings, will effectively work its way into a full-fledged dissemination program.

Should the Center establish a dissemination "office?" Yes -- an office that has the full capability to deal with success. Dealing with success means being able to respond to the consequences of effective dissemination -- a multitude of requests for reports, publications, products, and Center information.

Most universities have the capability to set up some type of "revolving account" to finance this type of activity. Costs of personnel, printing, mailing, and so on are reimbursed to the account by charging for publications.

To what extent should the Center work with national associations and organizations? The Center should identify its natural allies (e.g., as the Maryland Center has identified IEL, ASHE, and others) and work closely with them -- but care is needed. All national associations and organizations have their own agendas, and can sap the strength of a research center with too many conferences, presentations, collaborative meetings, and special projects. To the extent possible, the Center should seek to provide national associations and organizations with research information and let them run with it while the Center continues to conduct further research. To the extent possible, the Center's dissemination person has to help strike a balance between getting researchers to work with associations and other organizations while protecting the time of the researchers so they can accomplish their research goals.

Relationships with associations and other organizations can be fleeting and difficult to maintain on a personal basis, as officers and personnel change and priorities shift. But if the Center builds a relationship based on providing good research information to the association -- not a relationship built on personalities -- then a more solid relationship will be built.

At the same time, personal contact is important with the selected associations and organizations whose interests correspond directly to the

Center's interests. The Maryland Center would want to pursue personal contact and interaction with the Higher Education Clearinghouse, for example, and with the Chronicle of Higher Education writers and editors.

What are the most important factors in effective dissemination of educational research? The most important factor is well-conducted research that produces strong research findings that are useful to someone. Given this factor, the disseminator's life is an easy one.

The nature of education research, however, is that is usually produces a small increment in knowledge in a small area and, although well done, still has some flaws in the methodology. Given this, the most important factor in dissemination becomes the ability to interpret the immediate and future impact of the research and to convey this interpretation in a straight-forward but exciting way. Thus interpretation skills and writing skills are two vital components of effective dissemination.

I would consider the third most important factor to be the identification and use of all possible dissemination outlets. A multitude of people and organizations exist whose primary purpose is to provide other people and their constituencies with full information about education -- the popular press, national magazines, the education media, the associations, advocacy groups, the ERIC system, regional laboratories, and many others. Effective dissemination consists of getting a clear, important, well-written message to these outlets, so they can provide it to their constituencies.

Will dissemination of Center research improve higher education? No, not directly. Here I make the real distinction between dissemination of information and educational improvement. Simply disseminating information does not produce educational improvement that can be documented in a coherent way -- improvement may happen, but the links between dissemination and improvement are vague and slippery. But effective dissemination is at least a first step toward improvement.

Documentation of dissemination activities will provide a base for assuming higher education improvement. The Center can show that its research findings reach the people who can apply them to achieve improvement. It can survey the people who receive its findings and document their use of the research. It can then assume that the use resulted in some kind of improvement of higher education. Proof of the bottom line -- that management of higher education institutions improved or that American college students improved their achievement as a direct result of the Center's work -- may never be satisfactorily documented.

However, the Hopkins Center experience with trying to improve schools tells us that product development can bring a Center closer to achieving educational improvement. Research findings that indicate what educators should do are important, but insufficient. The findings need to be extended into research products that the practitioners can apply, step-by-step, to achieve improvement. It remains to be seen whether this is as true in higher education as we've found it to be in K-12 education.

MESHING THE GEARS

REPORTING ON HIGHER EDUCATION IN AMERICA

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MESHING THE GEARS:
REPORTING ON HIGHER EDUCATION IN AMERICA

Think of the Center as a machine. Somewhere at the heart of the machine is a set of gears -- gears of large diameter which turn slowly (no doubt exceedingly slowly in the estimation of some), gears of small diameter that turn quickly. Also think of the audience the Center wants to reach as a much larger machine, with many gear boxes. The secret to successful dissemination of the news of Center activities is to mesh your small gears with your audience's small gears and your large gears with your audience's large gears. To put it another way, you have to tailor your "product" to your "consumers." More on that later. First, a brief look at what education news means to Americans and a walk through the industrial park we call the "media."

Education News in America

There's no question that education news is important to people. Both higher education and elementary-secondary education are vast enterprises that employ huge numbers of people, account for a significant proportion of the gross national product and, most important, embrace an experience that EVERYONE goes through at one time or another. (Thus, there is no shortage of experts in education. In newsrooms, editors will defer to science and political writers, but they tend to exert themselves forcefully on education matters. After all, THEY went to school and college, and their children are in school or college. Many, perhaps the majority, of story ideas are generated by editors and reporters as a result of something that is happening to their own children and those of their neighbors.)

A number of polls and readership surveys conducted by news organizations have shown that people follow education news. The Baltimore Sun's privately conducted readership surveys indicate a consistently high interest in education. The Education Writers Association (EWA) last conducted a national opinion survey in 1977. To summarize its 10 major findings:

- People want to read, watch and hear news about education, higher and "lower."
- People get most of their news from newspapers and TV.
- They read newspapers and watch TV rather than listen to the radio for information about their schools and colleges.
- To learn about general education issues, people prefer newspapers to TV and radio.
- The nation by a slight majority believes the media tell people what they want to know about their schools.

- People believe by a slight majority that the media tell them what they want to know about general issues in education.

- In regard to the coverage of elementary-secondary news, people say that "discipline," "spending" and "subjects being taught" are the topics they want discussed by the media.

- The three top general education issues people want covered more by the media are "federal policies and programs," "trends in curriculum" and "national testing of students."

- Americans believe overwhelmingly that the media present education news so they can understand it.

- Of those people who believe that the media do not present education news in an understandable way, the greatest number list "vague statements" as the main reason.

This EWA survey was conducted nearly a decade ago, but I believe the findings are generally true today. (Annual Gallup polls of education substantiate my belief.)

If there has been any change in the decade, it is in the direction of MORE interest in education. Certainly this observation is upheld by membership surveys conducted in 1985 by the EWA. We found that members have been on the beat longer, that they spend more of their time reporting education, and, most important, that their news organizations place more emphasis on education, giving them more time, for example, to do major "projects."

No doubt much of this was brought about by the Great Reform Movement. The 1983 federally sponsored "National at Risk" report, followed as it was by a spate of generally critical reports by commissions, task forces and committees, served to spur education interest as state after state, local school board after local school board, began "reform" efforts. It's important to note that most of that reform has occurred at the state and local levels, providing hundreds, probably thousands, of good stories for newspaper, radio and TV reporters, not to mention writers for the Chronicle of Higher Education, Change, and specialized/academic journals. EWA members have followed these developments through its publications and through the bimonthly "clip sheets" of the Educational Excellence Network, now at Teachers College but founded at Vanderbilt by (among others) Chester Finn and Diane Ravitch to monitor the so-called "excellence" movement.

Meanwhile, in the mid-1980s, the movement spread -- graduated, if you will -- to higher education. James L. Fisher, former president of Towson State University and of the Council for the Advancement and Support of Education, traced this development on January 9 in the Baltimore Evening Sun. It began, perhaps, with Terrel Bell's "Investment in Learning," which urged a national debate on issues in higher education. Shortly afterward the National Endowment for the Humanities issued "To

Reclaim a Legacy," which concluded that "too many students are graduating from college lacking even the most rudimentary knowledge of history, literature, art and philosophical foundations of their national and civilization."

Next came a report from the American Association of Colleges which declared that a "misguided marketplace philosophy has led to an indisputable deterioration of the curriculum." Then the first Carnegie report, "College and the Undergraduate Experience," concluded that the general state of curriculum was "lamentable" and that commercialism in admissions was "scandalous." This was followed by another Carnegie report with essentially the same findings. The culmination, perhaps, was the 1986 report of the Carnegie Foundation for the Advancement of Teaching, calling for a "complete overhaul" of undergraduate education.

THE MEDIA

Much of the foregoing discussion has been rather up-beat. Now for the down side. Most news organizations were -- and are -- ill-prepared for the shift to higher education. A great irony is that despite the reform movement, despite the general increase in education news, despite the fact that most major newspapers (including my own) devote more resources and news space to education than ever before, education remains a lowly beat.

Roger Yarrington, who left the job of associate dean of the College of Journalism, University of Maryland in 1975 to return to serve as communication officer for a national religious body, conducted a survey of the education press in 1984. His major conclusions were:

- Most education writers concentrate on secondary and elementary education.
- Many are assigned to additional beats.
- Few focus on higher education exclusively.
- And the leading ones tend to work for papers with policy commitments to provide consistent coverage of education.

My own observations as a 21-year member of the 47-year-old EWA confirm Yarrington's. I could add that the education beat on a paper is often assigned to the beginning reporter, along with obituaries and police reporting. Many editors define the beat as school board watching (and an occasional bright feature on a "unique" local program).

But education writing can be a reporter's plumb. As Saundra Keyes, former education writer for the Nashville Tennessean and Louisville Courier-Journal (now deputy managing editor of the Orlando Sentinel), observes, education has built-in interest for readers because it involves two things they value intensely: their children and their money. Education accounts for nearly half of state and local government

expenditures in most states. Moreover, the beat cuts across more lines than any other in a news organization: politics, religion, business, the courts, sports, race relations, social issues and more.

All of these observations are as applicable to higher education as they are to elementary-secondary. But there simply aren't many higher education reporters out there. If we exclude what I call the specialized/academic press (Chronicle, Change, etc.), there are no more than a dozen full-time higher education reporters in the U.S. They are at a few newspapers with heavy interest in education (Baltimore Sun, Milwaukee Journal, Detroit News). The Boston Globe assigns a full-time higher education reporter, but no wonder. Colleges and universities are big business in Boston.

Yarrington found 12 higher education reporters among the 1,730 daily newspapers in the U.S., 48 of them with circulations over 200,000. Looking through the Editors and Publishers Yearbook, the "bible" of the industry, he found only 240 men and women listed as "education writers" or "reporters."

The EWA membership is at an all-time high of 523. Of those, about three-fourths are education writers for newspapers. (Most of the rest are public information people for colleges and universities.) Of course, the EWA doesn't include in its membership all education writers. Let us assume that there are 600 among the 1,730 dailies, and that almost all of the remaining papers have someone who covers education on a part-time basis. I know of no TV station with the full-time education specialist. We have had one TV member (he is no longer active) in the entire history of EWA. And we have had one radio reporter, John Merrow (still a member, but now of the MacNeil-Lehrer News Hour on PBS).

Yarrington (1984) reported:

> "In the smaller papers, from 100,000 circulation on down, you'll commonly find the person listed as education writer listed also as society editor, as the writer responsible for real estate, farm news, books or some other department. Some education writers also cover gardens, outdoors, films, sports, autos and amusements. Two of the more promising combinations I saw were education writers who also covered business and wrote editorials. Clearly education, employment and economic stores are closely related. All of these data suggest that education writers often are in that assignment for a short time, on their way to other responsibilities and covering education in addition to handling other stories. Even the ones who emerge from my inquiry as higher education specialists usually indicate they spend more time on secondary and elementary than on higher education."

Yarrington's survey results are consistent with my experience. Two years ago I was the coordinating editor of a two-year project in Indiana sponsored by the Indiana-based Lilly Endowment. Lilly was concerned

about the state's poor record in economic development and its dreadful record in attracting and graduating black students. Four journalists in 1985 and four in 1986 were given generous fellowships to examine one aspect of higher education -- it was hoped but not required that the topic would fall in one of the above subject areas -- and to write a series for their home papers (or produce a series for their home TV or radio stations). We had 10 applicants the first year and seven the second. Even though word had spread about the first-year experience, even though two of the first-year fellows had won well-publicized awards for their efforts, we had clearly scraped the bottom of the barrel by the second year. Two of the papers participating in 1985, the Gary Tribune and the Indianapolis Star, were repeats in 1986. And despite our efforts to publicize the program, the papers in Bloomington and Lafayette, home of Indiana University and Purdue University, respectively, did not apply. (The public radio station at Indiana University did participate the second year.)

We have to assume, then, that the vast majority of U.S. education reporters, and of reporters assigned, however temporarily, to education, spend little time on higher education. There is evidence, however, that that is changing and that more time and effort are being expanded on higher education. The challenge for the Center is to take advantage of that historical moment.

What do education reporters look for, and how do they operate? What is the "culture" of the newsroom? From the above, it must be obvious that education reporters for newspapers are in heavy competition with other beats if they specialize exclusively in education. Those reporters for whom education is a part of their responsibilities have even less time to devote to school and college matters.

TV reporters are almost always generalists. In large metropolitan areas, they arrive at "scenes" -- a school "riot" has broken out, the morning newspaper has published a good feature, an anti-desegregation group has called the assignment editor to inform him or her that a demonstration is planned for 3 p.m., word is out that the evening school board meeting will feature a hot discussion on sex education. Often, the reporter has just reported on an auto wreck or mayoral press conference and has little idea of the background of whatever he or she has been assigned to report. (Newspaper reporters spend much of their time briefing TV reporters, who are notoriously ignorant of education trends and issues.)

Radio reporters of any stripe are a dying breed. "Once the backbone of electronic journalism and the first source of live reporting, radio news is on the skids," The New York Times reported recently. Following the deregulation of radio -- stations are no longer required to devote specific time periods to public affairs programming, and the Federal Communications Commission no longer keeps records of radio news employees -- many stations have cut down on news staffs. The number of all-news stations has stabilized and declined in some cities

(from three to one in Washington, D.C.), and in most major cities the number of radio reporters "on the street" has declined to a precious few.

So we are talking largely of newspaper reporters and editors. Most of them, as they look at education news from national sources, are looking for application. There are a few exceptions to this. "National" newspapers like the Wall Street Journal, the Christian Science Monitor and USA Today are looking for national stores. But reporters in Columbus, Ind.; Bend, Ore.; Las Vegas, Nev.; and, yes, Portland, Ore. and Baltimore, Md, are under constant pressure to "localize" stories.

The reason for this is simple. Again with a few exceptions, almost all education reporters are assigned to local desks. Their bosses are city editors. Their assignments include covering the local school board meetings, an excruciating experience which leads many talented journalists to get out of education reporting as soon as possible. They look for stories that can be "plugged in" locally. They compete with other beats on their papers for increasingly sparse space in a diminishing "news hole."

Let me give an example. Four years ago at the EWA national seminar in San Francisco, we arranged a session on the forthcoming "Nation at Risk" report. It was April, and though the national commission's report wouldn't be out until mid-May, two commission members agreed to appear on a panel on Friday afternoon. One of them, for reasons known only to him, spilled virtually all of the beans. Our members took copious notes, and I took care to see what kind of coverage the session produced.

Almost without exception, papers that carried the story carried it only if local comment could be obtained. Even though they had sent a reporter to San Francisco, editors were not interested in a story about a reported national decline in educational quality if it could not be localized, with comment from the superintendent or school board president. Such was not the case six weeks later, when the report came from the White House, when it was accompanied by remarks from the President and when it contained phrases such as the "rising tide of mediocrity." Associated Press stories appeared on Page 1 of newspapers across the nation.

Education reporters want:

- Stories that can be localized

- Stories that allow comparisons of their towns, cities and states with other towns, cities and states. We are a nation of comparers. We dote on Top 10s and Bottom 10s. Our sports pages are full of such statistics. Editors love them. I'm convinced that the tremendous interest in SAT scores, an interest that has lasted almost two generations, stems from this deep-seated desire to compare "us" with x.

- Stories that can be made into graphics. This is true of newspapers and TV. It's an era of editorial graphics, and no self-respecting newspaper is without them.

- Man bites dog. Yes, it's still true. People don't want to read or hear about business as usual in schools and colleges. But they will read about the unusual, the explosion of a myth, the deviation from common thinking.

- Reports. Often, reporters aren't very critical in evaluating the contents of a report, but the report automatically covers much of the ground the writer has to cover in preparing a news story -- who, what, why, where and when. Just the fact that it IS a report makes it authoritative. How many leads have you read in how many newspapers and journals that end, "according to a new report"? The current reform movements in higher and elementary-secondary education have been fueled by reports.

- Research, particularly if it fits the above criteria. Again, reporters do not ask enough questions about research; they don't know how to distinguish the good stuff from the junk. By and large, they don't know how to go about obtaining good research. And only the more sophisticated go beyond the research they see to ask a question posed by Ward Mason in his paper for the National Center for Postsecondary Governance and Finance: What is the relationship between research and practice?

An EWA board member, Larry J. Hayes, editorial page editor of the Fort Wayne Journal Gazette, believes the "gap between theory and practice" is the biggest story in education but also one that has gone largely unreported (Bulletin of American Society of Newspaper Editors, 1986). Speaking at the 1985 meeting of the American Society of Newspaper Editors, Hayes advised journalists to learn more about research, to learn to distinguish good research from bad, and to develop their own network of experts.

Meshing Gears

It seems to me that the Center, if it chooses to, can make a huge impact if it learns to mesh its gears properly (to return to my original metaphor). This is because governance and finance are two particularly ripe topics. (Maryland, for example, will examine its system of higher education governance as the result of a report leaked to the press in early January.) Several of the Center's initial projects are of wide interest. Take John Lee's investigation of "differential pricing." It fits in nicely with the holiday report of the Congressional Joint Economic Committee, and Lee's findings ought to be of vital concern to the millions of American paying college tuition.

I agree that dissemination should be a major part of the Center's activities. From the moment a research project is but a gleam in your eye, you ought to be thinking about spreading the word. Different audiences will have different needs. There are at least four main ones, three of which I know something about.

1. The academic audience, reached through journals and specialized publications.

2. The higher education journals such as Chronicle and Change.

3. The national popular media such as The New York Times, Newsweek and the networks.

4. The daily papers around the country whose editors and reporters will ask one major question about your findings: What do they mean for us?

The Center should get to know some of the major actors in these media. Find out how Time magazine and the Wall Street Journal and NBC operate, who is responsible for education at each of these places; how they like to be informed, how you can help them do their job. These are obviously the Center's big gears, and there is nothing to replace personal contact.

Some of the audiences overlap; a professor at the University of Wisconsin-Madison might read the Wisconsin State Journal, The New York Times, the Chronicle, the Bulletin of the AAUP; listen to "All Things Considered" and watch Dan Rather and MacNeil-Lehrer. It would be difficult for the Center to have contacted all of these sources, but it could have thought beforehand which media outlets it wanted to contact and in what way to contact them. In a sense, the Center would have controlled its own news.

Two other pieces of advice: Do not fear controversy, and do not hesitate in the right circumstances to lower your academic brows. The American press thrives on controversy. A reporter's lead, as I've said above, must of necessity distill and reduce to the lowest common denominator. Take advantage of it when the time is right. "A National At Risk" did; it was written deliberately with phrases and metaphors ("rising tide of mediocrity") designed to attract reporters and editors. The report launched a long-overdue reform movement. When Russell Edgerton complains, as he did in the November-December 1986 issue of Change, that the Sunday papers had "rifled through (the Boyer report) and highlighted all the negatives," I say balderdash. The report WAS largely negative. The press was doing its job. Higher education is due for a major overhaul.

In this respect, the "Consensus Conference Model" described by R.G. Havelock appears to be very useful. Not only does it open the decision-making process to people (including consumers) other than educators and researchers; it also approaches the media realistically. It recognizes that

sometimes you want to "make a big bang." Indeed, it accommodates the making of a big bang. And it recognizes "good clear writing."

The importance of good writing is my last point. Higher education is so clogged with nonsense and gobbledygook, 25-cent words where 10-cent words would do, the passive voice, the utilization of words like utilization! Putting out written material in clean, straightforward English would not be a low-brow exercise; it would be a great service to humankind.

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THE CONSENSUS DEVELOPMENT CONFERENCES OF THE NATIONAL INSTITUTES OF HEALTH AS A MODEL FOR EDUCATION AND OTHER FIELDS

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THE CONSENSUS DEVELOPMENT CONFERENCES OF THE NATIONAL INSTITUTES OF HEALTH AS A MODEL FOR EDUCATION AND OTHER FIELDS

In 1977 the National Institutes of Health initiated an innovative program to increase expert consensus on important medical problems. Identified from its earliest stages as "The Consensus Development Program" this effort was manifested principally in a series of carefully organized conferences which followed a distinctive pattern. The purpose of this paper is to describe that pattern in some detail, to discuss its costs, to consider its strengths and weaknesses, and to derive implications for fields other than medicine. The Consensus Development Conference has always had the avowed purpose of achieving an expert "consensus" where a significant amount of research was available. Thus it involves both knowledge synthesis and some arbitration of differences among leading researchers. However, from the beginning these meetings have also been seen as a means of building bridges between research and practice and more specifically between clinical research specialists and primary care physicians. Other purposes included technology assessment, diffusion of medical knowledge to the general public and to interested lay communities, and (lastly) articulation of new research agendas and stimulation of needed research.

To date, there have been about 60 such conferences, and they have covered a very wide range of medical topics. Some conferences focus on a particular technology either for diagnosis (e.g. CT scanning) or treatment (e.g. electroshock therapy). Some focus on treatment modalities for a given disease (e.g. adjuvant chemotherapy for breast cancer). Others focus on health consequences of certain behaviors (e.g. consequences of obesity and dietary habits, habitual use of smokeless tobacco). Topics are determined by representatives of the various bureaus, institutes, and divisions within NIH and sometimes proposals from the National Institute of Mental Health are also entertained. Since conferences are partially funded by each of these agencies, topics are designated in a loose kind of rotation, roughly proportional to the size of the unit in question. Thus, there are more conferences convened on cancer-related topics than any other because the National Cancer Institute is the largest unit of the NIH.

Over-all management of all the conferences is in the hands of a small office under the NIH Director, the Office of Medical Applications of Research (OMAR). This office is responsible for maintaining a consistent CDC process, arranging publicity before and after, supporting the work of the panel, and evaluating both process and impact. Much of this work is carried on through contractors. The CDC process has been described and analyzed in a number of brochures, reports and other publications (e.g. see Perry and Kalberer, 1980; OMAR, 1983; OMAR, undated; Jacoby, 1983). The present paper is based on these sources augmented by several months experience as director of a support contract to OMAR in 1985 and 1986.

There also have been two formal evaluation studies. The first, by the University of Michigan, covered the early years of the program and focused on the process itself. The second, by the Rand Corporation, studied the impact of selected conferences on medical knowledge and practice. OMAR has also conducted a few surveys in connection with specific conferences and routinely asks panelists to provide feedback on the process on a standard form. Unfortunately, very little from these evaluative efforts has been published or is publicly available as of this writing. However, an examination of unpublished material from these sources suggests that the CDC process has become an accepted model in the medical community, is very well regarded by panelists and by conference participants, and has some impact at least in the awareness and knowledge of large numbers of medical practitioners.

Perhaps the most important point to emphasize here is that the CDC represents a coherent and distinct social innovation which has achieved acceptance within NIH and within the medical community during a time of fiscal stringency, having overcome widespread initial skepticism, and competing successfully in a veritable sea of medical meetings and publications. It has also been emulated as a model for medical technology assessment in both Sweden and the United Kingdom although the Swedish and UK variants have some significant differences, putting more emphasis on financial, ethical and other non-technical aspects.

This paper will be limited to a consideration of the CDC as an innovation in the social processing of knowledge with implications for fields other than medicine.

The Process as a Whole

The focus of all CDC effort is the consensus statement, a document of roughly 12-20 typed pages, carefully crafted to respond to a set of questions previously posed in the conference planning process. The statement represents the collective judgement of a panel of experts with somewhat diverse credentials. NIH goes to some lengths to make the process appear legitimate, rational, and informed. They do this through careful selection of panelists, through assembling all leading authorities on the subject as providers of expert testimony, and through creating an open forum so that all interested parties are given an opportunity to give input. NIH is also at pains to point out that it is merely the convener of the conference, not the promulgator of the statement which thereby does not represent an official NIH or government position.

The panel sits on stage before the assembled conferees for one and one half days somewhat like a panel of judges, receiving testimony and interrogating those who provide it. At noon of the second day the panel retires for an intensive writing session which may last up to 16 continuous hours. Each panel is charged with producing a consensus statement responsive to all the pre-set questions by 9:00 a.m. of the third day of the conference. Each of the 60 panels to date has managed to meet this deadline. The text, stamped "draft" is then distributed to all those present and a further round of questions and editing suggestions is

entertained. The panel then retires for a final brief review and editing session. This edited version is then distributed to the press at a news conference convened for 12:00 noon.

Following the conference the statement is printed as a pamphlet and mailed to a larger audience of interested persons, primarily physicians. It is also published in at least one prominent medical journal, usually the Journal of the American Medical Association. From time to time other forms of dissemination are also attempted.

The Consensus Conference process divides clearly into three phases: the pre-conference preparations, the conference itself, and the follow-up. Substantial effort is expended on each phase, and adequate performance of each phase is essential to the over-all result. Each of these major phases also subdivides into a number of task elements. Some of these elements have been refined by NIH to a point where they are performed smoothly and efficiently time after time in almost precisely the same way. Some other elements are more variable in execution, depending on the topic selected and the mix of persons selected to make a contribution. A few elements, some important, continue to cause problems and are the subject of continuing concern within OMAR and of some criticism from outsiders.

Elements of The Process

The Pre-conference Phase. The success of the consensus conference process at NIH can be largely credited to elaborate and extensive planning, both for the process in general, and for each specific meeting. The pre-conference phase can be divided into roughly five task areas: 1) the identification of the topic, 2) the convening of a planning committee, 3) the assembly of the knowledge base, 4) advance publicity, and 5) logistics.

1. Identification of topic. Arguably the most important CDC task is the initial selection of the topic. Strangely, however, this is an area which has little formal delineation. There are some rather broad formal guidelines. for example, conferences "...may examine either emerging or established technologies," and "...are particularly useful for providing guidance when a controversy exists in differing therapeutic or diagnostic options and the issue is of public as well as professional interest" (OMAR, 1983, p. 2). Such language does not exclude very much from consideration.

On the other hand, there are a number of unwritten rules. The most important of these is that each of the Institutes takes its turn at proposing topics, very roughly in proportion to the fraction of the over-all NIH budget as previously noted. Some other unwritten rules usually but not always followed are: a) not too new; b) not too broad; and c) not too controversial.

a. Not too new. Most topics concern technologies that have already been in wide clinical use throughout the United States. Thus there has occasionally been criticism that conferences deal mostly with established rather than new technologies and are following rather than leading the state-of-the-art. The counterargument is that truly new technologies will not have an adequate data base behind them to be objectively evaluated. Further, there are other channels for introducing such new technologies and this is not the primary purpose of the CDC.

b. Not too broad. NIH tries to select topics which are of direct and practical interest primarily to physicians. As stated in the Guidelines pamphlet, "the primary focus of the CDC is the technology's clinical applications" (OMAR, 1983, p. 2). Frequently this results in the choice of topics which are remote from the awareness and understanding of the lay public, couched in terms that are comprehensible only to a medical audience. On those occasions when broad topics are selected (e.g. twice in recent years conferences have focused on the treatment of pain) the panel has had some difficulty coming to terms with the topic and delivering a concise statement which has value either to physicians or to a larger audience.

c. Not too controversial. CDC's are unlikely to deal with raging medical controversies, primarily because consensus in such areas would not be possible. The "consensus" that is reflected in panel deliberations and their statements will typically be a consensus that has already emerged at least among experts who have studied the problem closely. Thus, the statement may seem redundant with what is already known to many in the field and may be only a reflection or resummarization of knowledge already widely shared and accepted.

There is no formal list of potential topics and OMAR makes no formal periodic solicitation of suggestions from the Bureaus, Institutes, and Divisions of NIH (usually referred to internally as "the BID's"), any one of which is entitled to submit a topic at any time. Other conditions that inevitably restrict selection are the OMAR budget and staff support capabilities which allow only for between six and eight conferences per year currently and the lead time necessary for a conference which is typically about one year, but can be as short as six months.

2. The planning committee. The first formal act of developing a CDC is the convening of a special planning committee for that particular conference. The membership of the committee is dominated by NIH staff but a few outsiders are also invited including a person who has already tentatively agreed to serve as

panel chairperson. The prospective chair works closely with the NIH conference coordinator who will also be a substantive expert on the topic and in many cases the chief stimulator of the topic's selection. Other members of the planning group include an OMAR staff member and another administrative official from the BID which has proposed the topic. On occasion topics will be co-sponsored by two or more BID's in which case the planning committee will be expanded to reflect such co-sponsorship.

The planning committee meets formally for one day, supplemented by correspondence and informal meetings before and after this event. The planning meeting has a crowded agenda which includes the following tasks: (a) designation of the panel chair; (b) nomination of panelists; (c) identification of conference presenters; (d) clarification of the topic and preliminary definition of the knowledge base; and (e) determination of the questions to be addressed.

Usually about 12 panelists are named, two or more MD practitioners, one or two clinical researchers, one or two methodologists, a lay person who may be an active member of a disease society or a consumer organization, and, depending on the topic, a legal expert and/or a medical ethicist even though legal and ethical issues are not supposed to be addressed in any depth. A most difficult aspect of the planning committee's work is selecting panelists who are highly competent to judge the state-of-the-art but are not at the same time known to have publicly stated positions on the topic. Occasionally, panels and panel chairs have been criticized on grounds of bias by stakeholders with opposite views to those expressed in the "consensus." However, it is manifestly difficult for a panelist to have been associated in the literature with a topic over a number of years or in a number of publications without having come to any stated conclusions. The planning committee therefore has to make a fine distinction between someone who is generally respected as a medical authority in a general field or a related field and someone who is an expert on the particular topic addressed.

Identification of appropriate conference speakers is a somewhat easier task. These will either be experts in the field, or prominent stakeholders on the topic (e.g. industry and disease organization representatives). The medical research community is very large but also very well inter-connected with the scientific norm of refereed publication of all findings strictly adhered to. Added to this is the central role of the NIH in funding research on nearly every important medical problem. Therefore, when a planning group of five or six persons familiar with a particular issue come together, they are almost certainly able to identify the leading researchers and advocates for various positions.

An equally important and more controversial role of the planning meeting is the formulation of questions to be put to the panel. There are usually about six questions. The first question typically asks the panel to define the nature of the phenomenon. Another typical question asks about the scope of the public health problem or challenge including data on incidence and prevalence in the case of disease, trauma, or health-risk behaviors. There will always be a question about risks and contra-indications for any technology or procedure which is under investigation. Other questions will likely deal with causes, populations at risk, diagnosis, prevention, and treatment. The final question invariably asks what further research is needed on the topic.

Because the planning committee is meeting only for one day with a heavy agenda, the opportunity to explore nuances of the topic, to consider its true scope, and the depth of literature that might be available to support panel deliberations is very limited. Nevertheless, an attempt is made to scope the topic somewhat informally and major omissions are rare.

Once a topic has surfaced and a planning committee established, the process is most likely to proceed to a conference and the conference in all but one instance has resulted in a "consensus" made explicit in the consensus statement. Thus there is no precedent for outright rejection of a topic by a planning committee. On the other hand, planning committees often will work over a topic, broadening or narrowing the scope or changing emphasis. Furthermore, results of the planning effort are subjected to a final review and sign-off by the Director of NIH and changes are occasionally made at that level also.

3. The assembly of the knowledge base. Another important task of the preparatory phase is the retrieval and packaging of the knowledge base in a form which can be absorbed by the panel and presented to the conference. Three types of activities in this category should be noted: a) preparation of the book of abstracts, b) the NLM literature search, c) and the occasional use of experts in decision analysis and meta-analysis.

a. The abstract book. Well in advance of the conference each major speaker is asked to prepare an extended abstract of their presentation including key data with illustrations and tables. These "abstracts" are, in effect, mini-articles. They receive minor editing by OMAR but are not otherwise refereed. There may be as many as 30 such pieces which are assembled in a book which might run to 100 pages. The book also contains an introduction to the topic, the names of the panelists, the agenda and a statement about the CDC process. The abstract book is circulated to panelists in advance of the meeting and distributed to all conference attendees at registration. Although it is attractively covered and is costly

to prepare, this abstract book receives no further dissemination and is never published as such, with one exception which will be noted later. The importance of the abstract book cannot be overestimated. It tends to become the bible of the conference and the chief reference tool for the panelists. The abstract book invariably gets high praise from panelists.

b. The NLM literature search. A representative of the National Library of Medicine sits in on each planning committee meeting and is charged with the responsibility of making a comprehensive search of the medical literature. Copies of a computer print-out including author abstracts are mailed to each panelist along with the abstract book. This compilation can sometimes run to hundreds of items and is not generally viewed by panelists as nearly as helpful as the abstract book as such. NLM does no interpretation or synthesis and only a minimal amount of sorting and weeding of items. Experience suggests that library state-of-the-art even in medicine still requires a considerable amount of human intervention.

c. Decision analysis and meta-analysis projects. In recent years OMAR has made a few attempts to bring experts on decision analysis and/or knowledge synthesis into the process. Usually, such experts have worked more-or-less in parallel with the panel, doing their own data collection and analysis, then presenting their conclusions or decision-tree frameworks either to the conference as a whole or to the panel in chambers. Sometimes these efforts are rated as helpful by panelists but so far none appears to have had a decisive role in panel deliberations or the framing of the statement. This may be partly because OMAR has been extremely cautious in offering such services to panels, not wanting to disturb what they see as a basically effective process.

4. Advance publicity. OMAR invest weeks of effort and many hundreds of dollars in advance publicity for all conferences. An effort is made to acquire mailing lists of all medical specialists who might have an interest in the topic. Glossy colored brochures are then mailed to a general list of thousands in addition to these special lists. Total distribution of advance flyers is between 17,000 and 20,000. There are also advertisements in prominent journals and considerable local promotion on bulletin boards, etc. The avowed primary purpose of all this activity is to give every concerned individual an opportunity to contribute to the process. It is not known how much this actually contributes to widespread participation. Attendance at conferences generally ranges between 100 and 300, depending on the breadth and perceived importance of the topic. Roughly half of those who attend apart from invited speakers are from the local 3-state area and a large proportion of these are affiliated with NIH or other federal health-related agencies. Physicians who attend earn continuing education credit

from the NIH Clinical Center which is an accredited medical education facility.

5. Logistics. All conferences to date have been held on NIH premises, usually in their major auditorium. Expenses but no fees are paid to panelists and speakers and special accommodations are arranged for them at a nearby hotel. All other participants are strictly on their own regarding arrangements and expenses. The OMAR support contractor provides a special facility where panelists hold their closed deliberations and are given clerical support and meals during the extended writing session. Although there are numerous advantages and some disadvantages of having the same site time after time, cost and convenience to NIH are probably the prime considerations and no other policy has ever been seriously considered.

The Conference Phase. Like the pre-conference phase, the conference itself runs on a smooth, highly structured, and tight schedule which is invariant and has been since nearly the beginning of the program in the 1970's. There are eight major components which deserve mention: (1) initial orientation of the panel, (2) expert presentations, (3) stakeholder presentations, (4) questions and floor participation, (5) the drafting session, (6) the public draft review, (7) the final closed review, and (8) the press conference.

1. Orientation and charge to the panel. On the evening before the first session the panel meets for dinner and to discuss their duties. For most this is also a get-acquainted session. There is a lead-off presentation by the OMAR director in which the process is reviewed and the duties of the panel spelled out. This presentation is invariant and is backed up by descriptive pamphlets on OMAR and on the CDC process. Panelists have already been briefed by mail but even with repetition misunderstandings may persist. The panel chair then takes over the meeting. Sometimes the chair will entertain a brief general discussion of the topic. More commonly the chair will say something about his or her approach to the leadership task, set goals and sometimes assign writing subgroups for different questions.

2. Invited expert speakers. The first full day is taken up with presentations by expert speakers. Presentations are made in clusters of three or four each, followed by a question and answer period on that cluster. There is some attempt to group clusters in the order of the questions for which they are most relevant. For example, epidemiological studies showing the extent of the problem tend to come early, diagnostic procedures somewhat later, studies of treatment effects later still, and ethical, legal, and sociological issues last if at all. Some presentations will represent reviews or summaries over a number of researchers or a line of research done by an investigative team. Yet, there will also be single study presentations if these are thought to be of sufficient weight to merit such treatment. As noted earlier, there are sometimes special

presentations on the decision process that might be followed to reach a consensus on one or more aspects of the problem, and in at least one instance there has been a commissioned meta-analytic study, reviewing a large number of quantitative research reports from different authors within a common analytic framework (in that instance, adjuvant chemotherapy for breast cancer).

At the close of the afternoon session the panelists retire for a private dinner, discussion, and work session. Usually some preliminary drafts of the first question are made at this time but there is no charge from OMAR to undertake any writing tasks, and there is an admonition that final responses cannot be formulated until all the testimony is taken into account.

3. Stakeholder presentations. Although there may be some spill-over of expert presentations from the first day, the morning of the second day is intended primarily for shorter presentations from persons and groups having a particular point of view toward the topic. These may be spokespersons for the various industries or vendors who have some involvement in this area. There will usually also be representations from disease organizations, e.g. American Cancer Society, patient advocacy groups, the legal profession, and medical ethicists. In theory, anyone is entitled to make a presentation in this forum. It is also at this point that some of the most heated controversy is joined.

4. Question periods and open discussions. Question periods are dominated by the panelists who sit as a group on stage, appearing and acting somewhat like the Supreme Court or a Congressional committee. Some questions are also entertained from the floor. Most of these come from other speakers and there are a scattering of questions from other members of the audience. However, most of the audience most of the time are merely listeners and observers. At least until the time of this writing no attempt has been made to introduce remote hook-ups so that observer-listeners can participate from other parts of the country although the technology for such remote linkage, both audio and video, has been available for some years.

5. The drafting session. The most dramatic phase of the conference takes place behind closed doors starting the afternoon of the second day and extending sometimes non-stop until dawn of the third day. This is the writing session. The goal of this session is clear, compelling, and final: the panel must prepare a text responsive to all the pre-set questions and representing a consensus, i.e. an essentially unanimous rendering of their views, to be distributed to all conferees at 9:00 a.m. of the third and final day. It is up to each panel to manage its own time and divide up the writing tasks as it sees fit within certain constraints established by OMAR. Thus the role of the chairperson at this stage is crucial.

All statements are prepared in four drafts, color-coded to mark the progression toward the finished state. The OMAR support contractor processes hand-written material from panel working groups very rapidly so that there is minimal waiting for typed text. Usually, an entire draft will be discussed by the total group, question-by-question. Then recommended changes and additions will be made by assigned individuals or subgroups, followed by a reconvening of the panel as a whole.

With the exception of a 2-3 page draft introduction to the topic, none of the actual writing is done in advance by OMAR or the sponsoring BID. However, a handful of OMAR and BID staff members sit in as observers and occasionally make suggestions or comments on the wording of responses, usually for clarification. As the custodian of the process the OMAR staff is concerned that the panel adhere to the ground rules which include basing all statements only on evidence presented either orally or in written form and concentrating on technical as distinct from moral, legal, or fiscal issues. Cost-benefit analysis in either a broad or narrow sense is generally out-of-bounds for a consensus statement.

The writing sessions are almost always long and exhausting but also perceived as uniquely rewarding by most panelists. Usually they go longer than panel members anticipate, despite advance notice from OMAR that most writing sessions are very long and arduous. It is unusual for a panel to complete its work before midnight. The norm is somewhere between one and three a.m.

Following completion of the panel session, the OMAR support contractor must still type and reproduce the semi-final draft for distribution to as many as 400 persons by 9:00 a.m.

6. Public review of the draft. The panel chairperson begins the last plenary session by reading the draft text. At the close of the reading, questions, comments, and suggestions for amended wording and phrasing are entertained from the floor. At this time there may be little response from the panel. In effect the suggestions are taken under advisement without clear indication of how they are to be handled.

7. Final closed review. At approximately 11:00 a.m. of the third day the panel retires for a final private session to amend the document, taking into account whatever comments from the floor they feel are important. There is great time pressure in this meeting which can last no longer than one hour. At the end of the meeting a final draft including final alterations of text in handwriting is photocopied for distribution at the press conference.

8. Press conference. A press conference is convened at noon to make public announcement of the findings of the panel. The panel chair is in charge of this meeting. There is usually an initial summary statement of one or two paragraphs which is read by

the chair. Then questions are entertained on any aspect of the deliberations. Sometimes the chair responds to all questions but more commonly different members of the panel respond, depending on the role they played in the drafting or the knowledge they may have regarding the subject. These responses may go beyond what is said in the actual document.

Attendance at the press conference varies depending on the perceived news value of the topic. Thus, narrow and technical topics are likely to draw only a few specialty reporters, whereas relatively hot topics like AIDS screening, or topics with broad public interest, like obesity will, draw dozens of reporters and several network and cable camera crews.

Post-conference Activity. The CDC process does not end with the conference. There are several follow-up activities for each conference intended either to enhance its impact or to maintain the integrity of the process. These can be described under four categories: (1) diffusion to medical practice, (2) diffusion to the public, (3) evaluation, and (4) follow-up on the topic.

1. Diffusion to medical practice. Following an additional round of editing by the panel chair, the statement is printed in two versions, a "flat," a plainly printed documentation standard size paper, and somewhat later a booklet with a glossy colored cover. The flats are printed by the Government printing Office and a run is typically 25,000. The printing run for the pamphlet version is typically 5,000. For some topics, private sector underwriters support additional printing runs and popular CDC statements are sometimes reprinted.

An effort is also made to publish the statement in at least one journal which is widely read by medical practitioners. Right of first refusal is given to the Journal of the American Medical Association, the most widely read medical journal. In recent years JAMA has almost always accepted the statements for publication.

Since early in 1984 OMAR has also made arrangements for the Hospital Satellite Network (HSN) to videotape segments of the conference and interviews with panelists as a package for Continuing Medical Education credit. The one-hour tape is then inserted in the HSN programming schedule and broadcast to its 500 subscribing member hospitals. The broadcast is repeated at least three times in different time slots to allow maximum opportunities of exposure.

2. Diffusion to the public. Although medical practitioners are the prime target for CDC's, there is also a clear desire to reach a broader audience. This is the prime rationale for the press conference. There are also press releases before the conference which go to 500 editors around the country. OMAR has a full time communications officer who handles public relations and distribution generally and maintains contact with both print and television media

representatives. Each Institute of NIH also maintains an office of this kind and assigns its public relations officer to work closely with OMAR on conference publicity.

Although there are no formal data available on actual news coverage, conferences with topics of broad interest seem to be fairly well covered by the major national newspapers and the wire services. Hot topics may also get some brief mention on nightly national network news. For example, the CDC on osteoporosis which concluded on February 11, 1987, received a two minute special segment on the NBC Nightly News the same evening. More typically, CDC's are given fairly expansive coverage on local Washington, D.C. news programs.

3. Evaluation. There is no institutionalized procedure for evaluating conferences. However, various types of data are collected routinely, and this data is sometimes summarized and reviewed by OMAR. A minimal source on all attendees is the "door survey" distributed at the beginning of the conference which asks for data on occupation, place of work, educational level, reason for attending, and source from which information about the conference was obtained. A second source is the post-conference reaction form required of all attendees who desire CME credit from the NIH Clinical Center. This form elicits general evaluations of the conference, the speakers, and the statement. It is in no way a test of the attendee's understanding of the topic or learning from the process. Data is tabulated and internal memoranda are occasionally prepared based on these two sources but such findings have never been published.

The door survey results indicate that the conference is largely attended by medical practitioners and other related professionals in appropriate numbers, with a fairly heavy proportional participation from the local area and from persons employed by the federal government in one capacity or another. The CME surveys generally show very positive ratings of all aspects of the conference on which they are questioned.

A more detailed source of feedback to OMAR is a 12 item post-conference questionnaire which all panelists are requested to return. This form asks for both ratings and comments on all aspects of the conference, starting with the background material, abstracts booklet, the questions posed, and moving on to each element on the agenda. OMAR has also made periodic tabulations and summaries of this information. Some publication of this material was planned for 1987. The panel survey results are treated as strictly confidential and are closely guarded by OMAR staff. However, the trend of responses over the years has been clearly very positive on most aspects. Much of the comment and concern is focused on the writing process and the long writing session which many panelists find gruelling. Although many suggestions have been

made of ways to improve this process, there is no consistent feedback pointing to clear alternatives or significant modifications.

Approximately a month after each conference, OMAR convenes a post-mortem meeting involving members of the planning group (but not the chair). At these meetings observations are made about all aspects of the CDC including the observed performance of the panel and the panel chair. The purpose of the review is primarily to make sure that the CDC process remains on track.

In addition to such routine data collections and informal evaluations, NIH has commissioned three evaluation studies over the years. The first was conducted by the University of Michigan and focussed primarily on the conference process (Wortman et al., 1982). The National Opinion Research Center, together with CDP Associates, the prime OMAR support contractor, conducted a survey of dissemination effectiveness resulting from two conferences in 1981 and 1982 (on CT scanning and on total hip joint replacement). Results of these surveys (reported by Jacoby, 1983) indicated that awareness levels after a conference ranged from 12% to 37% among nationally targeted medical specialties. However, less than half of those who were aware of a conference had any knowledge or recall of conference findings.

In the early 1980's NIH commissioned a much larger study of CDC impacts from the Rand Corporation. Results of this study have not yet been published.

4. Follow-up on the topic. NIH has no established process for pursuing a topic beyond the conference. Therefore, as new data become available which would contradict or bring into question panel conclusions, there is no way to amend the statement. No panel has ever been reconvened although some topics have been revisited over the years (e.g. breast cancer, three times, and pain, twice, each time with a slightly different slant).

No specific efforts are made by NIH to follow up on any recommendations or findings contained in the statement or articulated by the panel. In the late 1970's there was some consideration given to following consensus conferences with what were tentatively referred to as "interface development" conferences. These later events would pick up where the CDC's leave off on some important topics, directly treating the social, ethical, legal, and economic implications. Such conferences were intended to be within the province of a non-NIH unit of the Department of Health and Human Services, the National Center for Health Care Technology. The NCHCT had a brief life in the DHHS, being abolished in the early 1980's as part of a budget-cutting exercise.

It should be further noted that NIH does not follow up in any way on the research implications which are always the last item in a statement, this despite the fact that NIH is primarily a research supporting government agency.

Costs

The average cost of a CD conference has been reported in one source (Henig, 1985) as $75,000. However, this figure only covers direct charges for the work of the OMAR support contractor including participant reimbursements and printing. There are much larger hidden costs including an OMAR professional staff of six, devoted nearly full time to conference-related activity and substantial labor contributed by the staff of the particular NIH bureau or Institute sponsoring a conference. OMAR also calls upon the services of the National Library, a graphics unit, the GPO, press offices, and others, and does not pay for the use of the conference hall. Videotaping for the HSN has so far been underwritten by private sources as have some printing runs for some conferences. Adding to these items the necessary administrative and overhead costs of the support contract, the real costs of a conference are probably nearer to $200,000 although no such accounting has ever been made.

Above and beyond those costs are the very substantial contributions of the panel and speakers, all of whom donate their services. Because most of these persons are MD's or Ph.D.'s at the top of their professions, their total contribution in 1987 dollars might be as much as $100,000, especially considering the amounts of time invested by speakers in preparing presentations. At first glance, such contributions might appear to relieve the government of a substantial cost burden. However, when such persons donate their time, they are not forfeiting a day's pay. In fact, their institutions or their patients are paying through fees and salaries. The source of such funds in many cases can be traced back to the federal government in one way or another.

Weaknesses of the Model

The Consensus Development Conference model has been subjected to occasional sharp criticism from participants representing minority or divergent views (see, for example, Ahrens, 1985, Oliver, 1985a, reply by Jacoby and Rose, 1985 with rejoinder by Oliver, 1985). There is no question that there is considerable pressure during the writing session to submerge differences and disagreements. Statements are not intended to be literature reviews or scholarly analyses which reflect divergent opinions.

There is also strong pressure exerted against any panel member issuing a minority report or even a minority view on a given question. In this sense it is like a jury proceeding. There are at least two consequences of this which are unfortunate. First, the language of a statement which is acceptable to all panelists may sometimes blur rather than sharpen important issues. Secondly, there is a tendency not to

select issues which are too controversial in the first place, regardless of their apparent importance. In effect, NIH does not want any CDC reporting that there is not any consensus on an issue even though this could be an important fact worthy of wide dissemination.

Ahrens and Oliver also charged that the panel selection process was stacked in favor of one point of view and that their conclusions were fore-ordained. This is not a fair criticism of most panels at least from the observations made by this author. As stated earlier, panel selection is a delicate process in which expertise and objectivity are sought by the planning committee. The OMAR staff is particularly sensitive to this issue and are likely to challenge some panel selections if it turns out that the proposed panelist has a previously stated position on the conference topic.

The CDC process does not work very well when the data base is weak, i.e. when few empirical studies have been addressed to the problem. CDC's are not designed to explore new ground nor to give a thorough airing to a previously obscure issue.

It is also a less-than-adequate mechanism for handling topics which are very complex, and/or where the data is substantial but diverse and inconsistent. A 1986 conference on the management of pain, for example, had difficulty coming up with a statement which had much force because the defined topic was too broad and many-faceted.

Strengths

In spite of such criticisms, the CDC process has much to recommend it in the medical context. It is an especially effective tool for focusing attention on a topic. Regardless of what the statement says, the fact remains that many hundreds of people including leading experts and medical opinion makers have concentrated their attention on this one issue for a three-day period, some of them much longer. They have clarified their views, shared them with one another in an open forum, and either changed or reinforced their thinking on the matter.

Secondly, the CDC process usually succeeds in creating a document with both high visibility and high credibility. The care with which panelists and speakers are selected as well as the emphasis on the special structure of the event contribute to this credibility.

The pressure to create a concise and readable statement with minimal use of technical language also seems to be a desirable feature, even though some fine points and disagreements are lost or muted.

Finally, the attempt to force consensus among a diverse set of experts and stakeholders succeeds much more often than it fails, and it is therefore very much worth the effort.

Variants

The conference process described above has been maintained with remarkable consistency for nearly a decade since its inception. With such a record, and especially with growing acceptance of the process within the many Institutes, Bureaus, and Divisions which make up the NIH, there is an understandable reluctance to tinker with the process in spite of various criticisms and manifest weaknesses. Up to the present, there has been only one significant variant to the CDC model, and this is the process put forward by the National Institute for Child Health and Human Development. The NICHD model puts much more emphasis on extended panel deliberations and the preparation of a comprehensive and scholarly monograph to accompany the statement, and to stand as a publication in its own right. NICHD panels have planning meetings, take expert testimony, and do some of their writing long before the conference, is convened. This may reduce the burden on the final writing session but clearly increases the over-all panelist burden and greatly increases conference costs. Although NICHD spokespersons are strong advocates of their variant (Hill, 1986) there is no evidence to indicate that it has greater impact or is more cost-effective than the standard model.

As stated earlier, conferences explicitly imitative of the NIH model have been undertaken in the United Kingdom and Sweden. The substantial difference in these European approaches has been the inclusion and even the highlighting of social and ethical aspects of a topic which are ruled out-of-bounds by NIH. This type of emphasis suggests that the European variants are more concerned with influencing health practices and public attitudes than in influencing medical opinion as such.

Implications for Education and Other Fields

In many respects the NIH model reflects the unique structure of medicine and the dominance of one professional group, the MD's, in all medical research, technology development, policy and practice. Over the years the NIH has gradually gained acceptance in the medical community as a respected source of technical knowledge as well as the prime supporter of all kinds of medical research, but there is great reluctance by the NIH and the community it serves to extend its role beyond research. The NIH is not supposed either to make policy or to regulate practice. This is the major reason why social, ethical, legal, and fiscal issues are skirted. NIH, which is itself dominated by MD's who hold most of the same norms as their colleagues, is very cautious in extending its role into new areas such as the arbitration of conflicts, even of a technical nature.

Yet for most other fields including education, no costly conference procedure could be justified if all such issues were held in abeyance and it is doubtful that participants would have the self-discipline to restrain themselves in this regard anyway.

The credibility of the medical CDC's also depends to some extent on what might be called the invisible collegial structure. There is a very strong norm in medicine on the publication of all empirical findings in strictly refereed journals. Furthermore, there is a distinct hierarchy among journals with the New England Journal of Medicine being clearly the most prestigious. Thus when even a small handful of experts sit down to plan a meeting, they already know the people who are doing the most important work in a given field. Furthermore, they are likely to have high levels of agreement or consensus on who these people are. As a consequence, even though some speakers (e.g. Ahrens and Oliver) may feel that their views are not adequately reflected in a CDC statement, they are nevertheless included in the proceedings and allowed to make their case. The question, therefore, arises as to whether a field like education is organized similarly with norms as distinctly shared and perceptions of expertise as clearly focused and consensual.

Another important factor is the credibility of professional expertise among the public at large. Although the medical profession no longer has the near immunity from public criticism that it once enjoyed, the public and its elected representatives still is rather deferential to experts with medical credentials, especially when it is dealing with apparently technical issues. This is not true of experts in many other fields, particularly education. On many educational issues, members of the public often accept no expertise as greater than their own "common sense" opinions and perceptions. It is thus doubtful that a conference organized along the same lines as a CDC would enjoy the same credibility.

Finally, we come to the question of costs. All conferences are expensive but the elaborate planning, structuring, and dissemination activities surrounding CDC's put them in a class by themselves. As noted earlier, the real costs of a typical CDC probably range between $200,000 and $300,000, especially when "donated" time is included. Medical practitioners and researchers may be able to donate so much time because they are very well paid to begin with and have substantial control over their own calendars. Prevailing conditions in other fields are likely to be very different, yet the resources available to support conferencing activity are likely to be more modest.

We might then want to ask if there are cheaper ways to run consensus conferences to produce results nearly as satisfactory. The number of potential variants in conference structure is infinite so the answer is probably 'yes' in theory, but we have no idea what features are most dispensable. One very important aspect of the CDC's is the continuity in the process, the ability to sustain a well-articulated conference model over a great number of topics and over a ten-year period. It takes reliable resources to do this. It also takes an experienced team of conference monitors and managers such as OMAR has developed with its support contractors. Some of the early years were rough for OMAR, and there was a period of nearly two years when hardly any CDC's were undertaken. Anyone contemplating the start-up of a CDC process in another field should also expect to have these growing

pains. They should further realize that the model that will eventually work for them may not end up looking much like its NIH antecedent.

What, then, are the features of the CDC process which are most valuable as exemplars for other fields? In the opinion of this author, the focus on "consensus" as such is not one of these features. We have seen that "consensus" is often problematic even on technical medical issues unless they are narrowly defined. In education we might also be able to define a topic so narrowly that a kind of consensus would be achievable, but then the interest in the topic would probably be too limited to justify the investment in the conference.

On the other hand, what is especially useful as an example for other fields is the emphasis on developing and maintaining a consistent process, including planning carefully for stakeholder and expert participation, providing advance materials of high quality, structuring sessions so that

the meeting as a whole has a focus, and forcing a statement from a panel which represents a collective view and a product that can be circulated.

The CDC should be viewed as an interesting and probably important type of social engineering. We know what it is, and we can replicate it with predictable results at least within one field, medicine. This is no small achievement. Some day, constructive conferencing may become a kind of science. There will not be just one model but many clear alternative conference models which produce different kinds of results in a similarly predictable fashion. When that day comes, we will look back on the NIH model of the 1980's as an important early step in the emergence of this very useful branch of applied social science.

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DISSEMINATION, COMMUNICATION EFFECTS AND ORGANIZATIONAL EFFECTIVENESS

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DISSEMINATION, COMMUNICATION EFFECTS AND ORGANIZATIONAL EFFECTIVENESS

It isn't enough to discover a truth or to create a fact. Nothing of substance changes unless others learn the discovery is worth their attention. It is incumbent upon researchers, then, to attack the problem of access to research findings with the same seriousness with which they approach the formulation of theories and research methodologies. Otherwise, their work, like the hypothetical tree that falls unheard in the forest, will not only go unnoticed, but philosophically speaking, may not really exist.

Mason (1986) and others throughout this monograph, have reminded us that dissemination is a major function of all research institutions. The Proceedings of the Conference on Dissemination Findings of Research on Postsecondary Governance and Finance, often conveys an impression of dissemination as an arrow let loose toward a target. The arrow point carries understandable and timely accounts of Center research findings. The target represents selected audiences. The shaft corresponds with appropriately chosen interpersonal and mass media channels.

The analogy fits the classical conceptualization of communication as set forth by Shannon and Weaver (1949). They identified five parts to the structure of information transfer: source, transmitter, channel, receiver and destination. This essentially one-way model inspired decades of research on the effects each component has on cognition and attitude or behavior change (Hovland, 1959; McGuire, 1969; Schramm et. al., 1971; McGuire, 1973).

The purpose of this paper will be to remind researchers and those they engage in the archery of information transmission that dissemination does not constitute communication. It will draw attention to the importance of planning dissemination activities around known effects of communication with target audiences. It also will show that evaluations are necessary in establishing that communication has made a difference among audiences and in establishing that dissemination activities contribute to organizational effectiveness.

Communication Effects Research

Why is it that research center dissemination specialists frequently assume that their products succeed in communicating information and in changing attitudes or behaviors among members of target audiences? Researchers know that dissemination is not the same thing as communication -- that there appears to be no direct causal link between providing information to target audiences and affecting changes in audience comprehension, attitude or behavioral adoption. That is to say, inconsistency in cause and effect provides the backdrop for much that can be said about many specific communication outcomes.

Nevertheless, scholars have viewed effects of communication activities probabilistically in predicting whether they will be long-term or short-term; deliberate or unintended; directly causal or interactive; affect individuals, groups, organizations or larger social groupings; and/or will be primarily reinforcing, contribute to minor change or to major changes such as conversion. (Klapper, 1960; McQuail, 1983).

Researchers generally expect that short term, deliberate effects may be anticipated from well-developed campaigns using several media to obtain cognition development and to persuade selected populations. Examples include product advertising, fund-raising, public-information programs and political campaigns. These campaigns are overt in their objectives, are operated in a limited time span, have legitimate and authoritative sponsorship and are consistent with consensual values of established institutions. Non-deliberate short-term responses also might be precipitated in the form of collective reaction, which could include fear, anxiety, or social upheaval. (Ehling, 1987)

Those seeking long-term deliberate effects, such as diffusion in development (diffusion of innovation) and knowledge distribution (Rogers et al. 1973) recognize that these are achieved through interpersonal networks, power structures and formal education. Researchers know that mass communication plays only a supportive role in achieving long-term effects. Unintended long-term communication effects may include socialization, social control, reality definition and institutional change. The longer-term the effect, the greater will be the cost in achieving it.

The problem for dissemination specialists is one of balancing costs with desired effects and determining what effects can be obtained within known constraints. McGuire (1972) suggested a framework for studying effects that combines Shannon's model as independent variables with six of his own categories as dependent variables. Those categories include: presentation - being presented with communication; attention - attending to it; comprehension - comprehending its content; yielding - yielding to it; retention - retaining this new position; and acting - acting on the basis of it. In planning communication, a dissemination specialist could ask how each variable on the horizontal axis contributes to each variable on the vertical axis (see Fig. 1). If nothing else, such an examination would tend to temper their estimates of anticipated effects.

Figure 1

MCGUIRE'S COMMUNICATION-PERSUASION MATRIX

	Source	Message	Channel	Receiver	Destination
Presentation					
Attention					
Comprehension					
Yielding					
Retention					
Action					

Rogers (1971, 1983) developed a set of similar categories in studying the diffusion of innovation, identifying five stages in the adoption process: 1) knowledge 2) persuasion 3) decision 4) implementation and 5) confirmation. Hundreds of studies have shown the adoption process to be tied to interpersonal communication, yet affected by the social attributes of the potential adopter, the social environment, the psychological characteristics of the adopter, and the attributes of the innovation, itself, which may speed or retard adoption.

Earlier, Katz and Lazarsfeld (1955) studied the role of mass communication's support of interpersonal networks, likening the interaction to a "two-step flow" of information. Mass media act as influencers of opinion-leaders who mediate message flow to less active members of audiences. By the early 1970s McCombs and Shaw (1972) reconceptualized this idea by calling mass media "agenda setters," e.g., mass media tell people what to think about, not what to think. According to this model, communication with target audiences may be enhanced as opinion leaders consider and respond to agendas set by media.

Along these lines, Katz (1974) and associates began to think of the message recipient as the active agency in deciding what medium to use and what messages to attend to, dependent upon the specific gratification or use sought. In other words, the utilization of mass communication became the effect and the gratification became the cause. Psychographic studies have arisen out of the presumption that if audience needs can be identified, then messages can be tailored in ways that will encourage specific audience response as information-seeking and other behavioral activity.

Public relations theorist James Grunig (1979, 1983, 1984, 1987), operating out of a similar context, noticed that publics with similar demographic characteristics often do not manifest similar responses to communications. His research showed that attention to communication is often situationally defined. Dependent upon levels of problem recognition, constraint recognition and involvement in issues, individuals (and publics) will passively process or actively seek information.

Grunig defined publics (in keeping with Dewey, 1927) by the degree to which aggregations of individuals are affected by (latent publics) and recognize a problem (aware publics), and organize to do something about it (active publics). Hence, as situations change, the composition of publics also changes. Aware and active publics are more likely to seek and process information from media, while non-publics (those not affected by an issue) will process information primarily from passive media such as television or radio. Passive information processing eventually may lead to awareness and information-seeking.

Communication campaign researchers (McNamara, Kurth and Hansen, 1981) have found that three supplemental activities often help communication activities make an impact on public cognitions, attitudes and behaviors. The three include education, enforcement and engineering, described as the three-E model. Education in a public communication campaign serves to inform people about the important details or facets of the issue. Enforcement serves to enforce legal or other constraints on undesirable behaviors, and engineering serves to structure the physical environment to make it more difficult to behave in an undesirable way. These mechanisms might be important in translating policy research findings into policy applications. The three-E model has been put to use in campaigns to prevent drunk driving, to require seat belts, and to discourage smoking.

Studies (McAlister, 1981) have also shown that interpersonal support provides an essential backup to changing behaviors where engineering and enforcement are not possible, particularly in health- or safety-related activities. Organizations such as Alcoholics Anonymous or Weight Watchers are examples of such support groups.

Communication Effects Research as a Management Tool

If the findings from most communication effects research are correct, the most likely effect of communication programs will be cognitive (awareness or understanding). Attitude and behavioral change (in that order) are more difficult to affect. These may be modified only after long-term, multi-faceted approaches to communication have occurred on salient issues that individuals have recognized as problematic and about which they have resolved to do something.

The dissemination strategist for a research center, to be an effective communication manager, must help researchers to define the nature of the desired outcomes of their communication about research findings (e.g. long- or short-term, intensity, direct causal, degree). The

manager must help researchers to identify audiences as real (e.g. latent, aware or active) as opposed to imaginary (non-publics) and to select communication approaches most suited for reaching them (e.g. interpersonal versus mass mediated, engineered, enforced or some combination) as defined by their levels of information-seeking or processing behaviors and by the structures available for providing constrained or coerced effects.

With communication objectives specified, the evaluation of the effectiveness of communication becomes less problematic. If the goal of communication in a research center is to transfer information to groups of opinion leaders, then it will be possible to show how dissemination has contributed to that information transfer by measuring information change among them. If the goal is to affect policy change and other behavioral adoptions, this can also be inferred with careful aggregation of evidence.

But without the planning of communication by setting objectives and then analyzing their potential effects and costs (e.g., conducting formative and evaluative research), communication becomes a haphazard enterprise and its effects, if any, will be accidental. Dissemination efforts are limited by the degree to which disseminators fail to see the organization's communication as a measurable exchange between the organization and the publics in its environment.

Linking Communication to Organizational Effectiveness

A word about communication effects research as a measure of organizational effectiveness: Throughout this monograph authors have asserted that the Center's dissemination activities should contribute to attaining its organizational goals as stated in terms of cognitive, attitudinal and behavioral impacts on policy-makers and researchers, and through these, impacts on policy and research. Varieties of dissemination activities have been suggested to engage target audiences in the integration of research findings as cognitions and as behavioral applications. While these activities reflect logical approaches, they do not easily translate into measures of organizational effectiveness.

Of course, definitions of organizational effectiveness are fraught with inconsistencies. Some studies define effectiveness as goal attainment (Georgopoulous and Tannenbaum, 1957; Molnar and Rogers, 1976; Goodman and Pennings, 1977). Others employ a systems approach, which suggests that effectiveness occurs as organizations attain environmental equilibrium, rather than entropy (Katz and Kahn, 1966; Yuctman and Seashore, 1967; Molnar and Rogers, 1976). Yet others identify effectiveness as satisfaction of major constituencies (Bennis, 1966; Katz and Kahn, 1975). At a macro-level, each of these definitions speaks to organizations achieving some degree of environmental autonomy as organizations seek to protect their independence, which Hage (1980) suggests is derived as organizations employ strategies of domination or interdependence.

Whether these or other definitions obtain, the key to ascertaining effectiveness depends upon some formal means of assessment. Such assessments might hinge on at least one quality each perspective has in common. For example, measures may focus on the means by which effective organizations seek and exercise a degree of autonomy in reaching goals, in managing inputs, processes and outputs, and in dealing with internal and external constituencies (Cameron and Bilimoria, 1985). Measures may be operationalized as less regulation by government or less pressure from internal or external interest groups or the decrease in costs of managing those influences.

Organizational theory suggests that communication programs contribute to organizational autonomy. Grunig (1987) points out that just as organizations may employ strategies of dominance or cooperation in seeking to attain autonomy in the environment, organizations may employ communication strategies in parallel ways. Asymmetrical organizational communication seeks to dominate publics and other groups in order to achieve attitude change (agreement) or behavioral modification. This occurs when organizations research attitudes and opinions of target groups and strategically tailor messages to appeal to their mindsets. Organizations that seek to cooperate with publics by managing interdependence set symmetrical objectives for communication such as message retention (accuracy) and acceptance of cognitions (understanding). The latter approach characterizes communication objectives that emphasize mutual understanding, an approach often used by non-profit organizations and other organizations that tend to have ambiguous goals, amorphous linkages with the environment and a variety of constituencies.

Thus, if a connection between effective communication and organizational effectiveness may be inferred through the dimension, autonomy, then in developing communication programs dissemination specialists will seek to achieve effects that will contribute to autonomy. For example, research shows that communication campaigns may reduce opposition to issues but may not produce community or government support for them. Communication programs also may not increase employee morale or productivity, although they may help employees better coordinate their work with others in the organization (Grunig, 1987). And the author's research seems to indicate that open communication with media about specific and measurable organizational goals will result in greater accuracy of reporting (and in ways more salutary to organizations). Non-profit organizations often complain of misunderstandings with media because, whether or not it is deliberate, they do not typically embrace such openness nor set such standards of performance.

Each of these outcomes of communication may contribute to an organization's autonomy in its environment. The key to establishing the contribution of communication to organizational effectiveness resides in the quality of the communication effects research that communication managers design. Both formative and evaluative research are essential. Formative research assists managers in identifying problems that affect publics and helps in planning communication programs to reach them. With formative research, dissemination specialists can advise organizational management on the probable impacts that communication efforts may have on publics (or the consequences that publics may have

on the organization). Methods may include opinion research, environmental scanning, issue analysis, stakeholder analysis, or communication audits. Exploring linkages the organization has with the environment often helps to identify its latent, aware or active publics.

Evaluative research will base its measures on the stated objectives of dissemination activities as part of an overall communication goal. There is little to be gained by counting the number of press releases sent out, audience members contacted, meetings held or publications issued, if these are to be considered principal measures of successful communication. While these do provide insights into information available in the environment about the organization and are valuable for that purpose, they do not measure the impact of dissemination in any meaningful way. Grunig calls these "process evaluations."

Impact can only be measured with effects evaluations on variables such as awareness, knowledge, understanding, attitudes or behavior, through survey or experimental research. Effects evaluations can be quite costly, however, and many organizations do not utilize effects evaluations because of their cost. But process evaluations combined with periodic effects evaluations can infer impact. For example, an experimental procedure may demonstrate an effect and the percentage of people affected in the experiment may be inferred as a percentage of people contacted by the dissemination activity. Such combined approaches to evaluation can be used to approach the issue of a communication program's contribution to organizational effectiveness, by logical deduction rather than by direct measurement.

Conclusion

A research center's effectiveness obviously will be related to the significance of its research findings. A research center such as the National Center on Postsecondary Governance and Finance is better positioned than other kinds of organizations to recognize the importance of evaluative measures as evidence of the strategic management of the organization's primary mission -- creating and communicating research findings that make a difference to researchers and policy-makers.

Dissemination specialists know that it isn't enough to discover a truth or fact. It is the their role to make the truth available to those for whom the truth matters. As for other publicly or privately funded research centers, communication impact reports will assist the National Center in making the case to its sponsorship that research findings have found their way into the hands of people who can use them. Such reports will furnish concrete evidence of how a successful communication program enhances the Center's autonomy in its environment, and this evidence may be used as a measure of the Center's effectiveness as a research organization.

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CONFERENCE DISCUSSION

Ward S. Mason

CONFERENCE DISCUSSION

Following the presentation of papers, a general discussion took place in which paper presenters, Center staff, OERI representatives, and invited guests took part (see Appendix B for a list of participants). What follows is a synthesis of the discussion. It is based on written notes; therefore, no attempt is made to attribute statements. The document is organized by topic rather than by the natural flow of the discussion.

Dissemination Planning. The conference was concerned with planning a dissemination program. Many of the comments dealt with just how to move the planning process forward. Discussants recognized the need to plan for dissemination early rather than to wait for research to be completed. They suggested that communication planners start with constituency needs, working backward to both specific dissemination events and to the research agenda.

Center communication plans should take into account:

- Short term vs. long term impact;
- Specification of effects sought, such as changing minds, reconceptualizing problems, or defining the range of possible solutions; and
- Types and numbers of people and institutions to be targeted.

The Center was urged to maintain a degree of flexibility in planning for communication. Opportunities for dissemination are often emergent rather than anticipated. Successful centers usually have a core set of activities that define their identity and have the flexibility to respond to unforseen opportunities. In designing specific activities it is always important to differentiate the segments of the audience and to choose the most appropriate dissemination vehicle for each. However, precise targeting is neither possible nor desirable. A certain amount of redundancy in messages is essential to good dissemination.

Professionals indicated that the press finds newsletters useful. However, a good newsletter contains content, not organizational "gossip." Participants identified conferences as useful mechanisms for involving both researchers and practitioners in dissemination. Conferences focus effort and create visibility and synergy.

Legitimacy. Survival of the Center will depend on establishing its legitimacy through a variety of public communication activities. Communication must make clear that the Center serves the public interest. In doing so, the Center should also be responsive to inquiries. The Center needs to think through a policy concerning inquiries and referrals to other organizations, such as the ERIC Clearinghouse on Higher Education. Some services might be operated on a cost recovery basis.

Impact Evaluation and the Problem of Knowledge Use. A significant tension exists between the need to evaluate the Center's impact and the limitations of evaluation research. Appropriate and feasible impact goals are essential. Different criteria are needed for measuring different kinds of impact. The Center should tailor the evaluation of different dissemination activities to different levels on the steps of the communication scale (i.e. awareness, diagnosis, consideration of alternatives, action, and evaluation). But one should not expect the same impact from a newsletter as from a conference.

According to researchers, there are many kinds of knowledge use. In particular, not all uses are intended to achieve a goal. Communication that helps policy makers to redefine problems, or to approach them in different ways, may be an "enlightenment use" that is just as important as deriving a specific solution or recommendation, i.e. "instrumental use." Nor is all knowledge use rational. Rather, knowledge use is one ingredient in the complex interaction of social forces.

Cooperative Relationships. The Center needs to leverage its scarce resources by developing cooperative relationships with other research and service organizations. Some activities might be sponsored jointly. Careful consideration of the activities and services of other groups can lead to a more rational division of labor.

Working with OERI's regional laboratories may be useful. They are concerned with state-wide policy-making at all education levels and are interested in the articulation between pre-collegiate and postsecondary education. The FIPSE program is operated by the Department of Education and might fund the implementation of some Center products.

Management. The importance of the dissemination function needs to be communicated to the Center's principle investigators. Probably the best way of providing some coherence to dissemination would be to involve investigators in dissemination planning for their own projects.

A high status Associate Director of Dissemination is essential in order to defend the dissemination function in management councils. A high status position requires an appropriately high salary. However, it may be difficult to find an individual who could handle both this function and conduct research on dissemination. Be prepared to hire a highly talented individual whose skills may deviate somewhat from those requirements and then build the division of labor around his or her talents.

The Washington metropolitan area has a large number of writers, editors, and people with other specialized talents who are available on a part-time or contract basis. Utilize this pool of talent. Explore sharing personnel or functions with other organizations at the University or at other centers.

Conclusion. The Center is in its second year of operation. Recognizing that dissemination is an essential function of a research center, it has wisely chosen to examine research on dissemination and the experience of professionals to develop a well-designed dissemination program. The ideas generated through other Center planning activities should provide a solid foundation for developing specific dissemination plans.

APPENDIX A

Attendees at conference planning meeting, August 14, 1986:

- Salvatore Corrallo, Office of Educational Research and Improvement, Department of Education
- Russell Edgerton, President, American Association of Higher Education
- Elaine El-Khawas, Vice President and Director, Division of Policy Analysis and Research, American Council on Education
- Richard Millard, President, Council on Postsecondary Accreditation
- Ginny Carter Smith, (title), CASE
- Irving Spitzberg, Director, Council for Liberal Learning, Association of American Colleges
- Barbara Taylor, (title), Association of Governing Boards
- Robert Berdahl, Acting Executive Director, National Center for Postsecondary Governance and Finance
- Ward S. Mason, consultant

APPENDIX B

DISSEMINATION MEETING
November 21, 1986
9:30 a.m. to 3:30 p.m.
Center Conference Room

List of Participants

Invited Participants

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